

HANDICRAFT IN THE SCHOOL

GENERAL ARRANGEMENT OF SUBJECTS

VOLUME I

Easy Handwork for Infants. Editorially Contributed.

Introductory (Colour, &c.) -- Mat Plaiting -- Weaving -- Handwork with Pegs, &c. -- Stick Laying -- Unravelling -- Worsted Dolls -- Simple Toy Making -- String Work (including "How to Tie a Parcel") -- Maize-seed Beads -- Handkerchief Folding -- Paper Folding and Cutting -- Paper Flowers -- The Magic Folds -- Miscellaneous Folding and Cutting.

Raffia Work. MISS M. P. GOTT.

Materials -- Preparation of Raffia -- Winding -- Plaiting or Braiding -- Weaving -- Toy Making -- Coil Weaving -- Stitches of Indian Basketry -- Dyeing -- Sewing on Linen or Canvas with Raffia.

Educational Handwork. J. L. MARTIN, Headmaster of Adcroft School, Trowbridge; and C. V. MANLEY, Headmaster of Mortlake Church of England School, London.

Paper Folding and Cutting Exercises -- Systematic Courses leading to Geometry and Constructional Card-board Modelling, &c. -- Communal Work -- Plastic Work -- Wire Work -- Iron Work.

Stencilling. C. V. MANLEY, Headmaster of Mortlake Church of England School, London.

VOLUME II

Sand Modelling. F. W. FARRINGTON, Headmaster, the Medburn London County Council School.

A stepping-stone to the more advanced lessons on Clay Modelling which follow.

Clay Modelling in Manual Training. F. W. FARRINGTON, Headmaster, the Medburn London County Council School.

The term "Manual Training" is taken in its widest sense, and not as confined solely to "Woodwork".

Bookbinding. LEWES R. CROSSKEY, Art Master, Allan Glen's School.

Simple Leaded Glass Work. LEWES R. CROSSKEY, Art Master, Allan Glen's School.

Field Geography. G. LINTON SNAITH, B.Sc. (Lond.), Headmaster, Higher Elementary School, Darlington.

Chain Work -- Theodolite Work -- Prismatic Compass Work -- Contouring -- Traverse Surveying -- Map Making.

General Arrangement of Subjects

VOLUME III

School Drawing and Colour Work (Crayon, Brush, Pencil, and Charcoal). J. W. TOPHAM VINALL, A.R.C.A. (Lond.).

Free-Arm Drawing • Natural and Common Objects
• Graphic Expression and Figure Drawing • School-room Decoration • Painting.

VOLUME IV

Educational Woodwork. A. W. MILTON, Examiner in Manual Training, Education Department, Transvaal.

Principles and Practice — Class Materials
Drawing Instruments and Their Use — Tools and Their Use—Practical Work, &c.

SUBJECT INDEX

Bookbinding, ii, 135.

Clay Modelling, ii, 27.

Colour, i, 3; iii, 34 (and throughout vol.).

Communal Work, i, 205.

Crayon Drawing, iii (throughout vol.).

Dolls, worsted, i, 14, 15.

Drawing, iii (whole vol.).

Geography—Field Geography, ii, 105; Sand Work, ii, 3; Clay Modelling, ii, 27; Geography of Woodwork, iv, 105.

Geometry, in connection with paper folding, i, 53, 95, 145.

Handkerchief Folding, i, 23.

Ironwork, i, 226.

Leadwork, ii, 149.

Magic Folds, i, 27.

Maize-seed Beads, i, 23.

Mat Plaiting, i, 5, 6.

Painting, iii, 151.

Paper Flowers, i, 25.

Paper Folding and Cutting, i, 30; more advanced, i, 97.

Parcelling (How to tie a parcel), i, 22.

Pastel Drawing, iii (throughout vol.).

Pegs, Handwork with, i, 10.

Plastic Work, i, 223; ii, 10.

Raffia Work, i, 39.

Sand Work, ii, 3.

Stencilling, i, 211.

Stick Laying, i, 12.

String Work, i, 22.

Toy Making—Furniture, i, 15; Farm-yard, &c., i, 205; Worsted Dolls, i, 14, 15.

Unravelling, i, 14.

Weaving, i, 5, 6.

Wire Work, i, 224.

Woodwork, iv (whole vol.).

HANDICRAFT IN THE SCHOOL

VOLUME III

HANDICRAFT IN THE SCHOOL

VOLUME III

School Drawing and Colour Work

By

J. W. TOPHAM VINALL

A.R.C.A.(Lond.), F.R.S.A.

THE GRESHAM PUBLISHING COMPANY LTD.

66 CHANDOS STREET, COVENT GARDEN, LONDON, W.C.

PREFATORY NOTE

School Art and School Craft are indissolubly linked; they cannot be divorced. Their combined practice should lead to an unaffected enjoyment in the exercise of "invention". Invention is the very atmosphere of school life, and the child is always happiest when inventing. In school drawing there are opened two realms of inventive fancy, the "pictographic" and the "ornamental". Both afford scope for that self-expression which is so eminently desirable. Both have to be prepared for, by an orderly arrangement of lessons and by regular practice in the various methods and processes of draughtsmanship.

The same spirit lies at the back of all School Handicraft. The use of tools must be known; this in itself involves the resultant element known as "conventionality", and applies equally to art as to craft.

No drawing is absolutely literal. Here again respect has to be shown for the tools employed; hence representations in chalk, in pastel, in pencil, in ink, or even in colour are all more or less conventions contingent on the proper

manipulation of these mediums. This is not a drawback but an advantage. The one aim is not photographic "literalness" (an almost practical impossibility) but *truth*. Truth and exactitude, within the terms of the medium, are the only foundation for progress in the inventional sphere.

Object drawing, excellent basis though it be, must not blind our eyes to the real end of drawing, which is inventiveness or creativeness, be it pictorial or ornamental. Realism is only relative: representation should be subjective rather than objective.

Infants draw spontaneously from imagination, not from actuality. Older scholars will also readily invent, but it must be from an increased knowledge, and with such technical skill as any good drawing course will develop.

This book in some measure points the way, and indicates how this knowledge may surely be gained by the use of that multiplicity of means now placed at the disposal of scholars: in kindergarten work, nature and object drawing, technical drawing, graphic expression, and colour work.

J. W. T. V.

CONTENTS

FREE-ARM AND INDUSTRIAL DRAWING

	Page
INTRODUCTION - - - - -	3
The Equipment of the Art Side of Secondary Schools - - - - -	4
Art Classroom Stock - - - - -	7
Free-Arm Drawing - - - - -	11
Apparatus - - - - -	12
Mass Drawing - - - - -	15
Memory Drawing - - - - -	17
Description of Plates - - - - -	19

NATURAL AND COMMON OBJECTS

I. GENERAL PRINCIPLES, including plan of work - - - - -	51
II. CLASSIFICATION OF DRAWING - - - - -	59
III. TECHNICAL POINTS - - - - -	60
IV. GENERAL TOPICS - - - - -	68
V. DESCRIPTION OF PLATES - - - - -	77
MECHANICAL OR TECHNICAL DRAWING - - - - -	97
DIRECT MEASUREMENT FROM COMMON OBJECTS - - - - -	98
MECHANICAL DRAWING (<i>continued</i>) - - - - -	103
PRINTING AND LETTERING - - - - -	109
ALPHABETS FOR SCHOOL PURPOSES - - - - -	109

	Page
GRAPHIC EXPRESSION AND FIGURE DRAWING . . .	115
STUDY OF PICTURES AND ARCHITECTURE . . .	120
SCHOOLROOM DECORATION	122
DESCRIPTION OF PLATES	126
PAINTING	151
DESCRIPTION OF PLATES	153
MOUNTING OF DRAWINGS AND GENERAL APPLICATION OF PRINCIPLES	161

Free-Arm and Industrial Drawing



INTRODUCTION

This Course of School Drawing and Colour Work is designed to meet the needs of the general teaching of drawing in schools of all grades, both public and voluntary, primary and secondary. Its scope is therefore wide, and its appeal is direct to teachers, to enable them to know how to translate modern drawing methods into practical lessons. It aims at unifying the work on the broadest basis.

The examples shown are, with very few exceptions, miniature reproductions of actual demonstrations in teachers' classes, or notes given on the spot while the teacher was at work.

From the kindergarten "babies" to the "art class" the series has been personally and adequately tested. It is in this sense pre-eminently a system of "classwork" prepared not so much for the clever few as for the average many.

The author does not lay claim to having

originated the scheme, he merely interprets the one in vogue; but he believes he has systematized the work of the infants' and juniors' departments in a manner not previously attempted. He also feels that a broad survey, a bird's-eye view of the whole field, may be helpful if presented in unbroken continuity, particularly to head-teachers and principals of schools and training colleges; and this is what he has attempted to give in the work.

It will be noticed that the whole system springs from the evolution of the "point" or "dot" (pin-head, nail-head, carpet-pin, hat-pin, in increasing ratio, and so on through a series of gradually enlarging objects; coins, balls, fruits, &c.). It is thereby reduced to the utmost simplicity, while at the same time it tallies with the drawing "suggestions" set forth at various times by the Board of Education. The work ceases at the point where the aid of the art specialist has to be called in.

For the guidance of *secondary* school teachers the author contributed an article to the Special Art-teaching Number of *The School World* of February, 1903, on "The Equipment of the Art Side of Secondary Schools". Parts of it are here reproduced by the kind permission of the editors of that periodical. Throughout the present work it will be found that the needs of secondary teachers have been fully considered, and the section on Figure Drawing will especially commend itself to those so engaged.

Neither has the "vocational" side been neglected (known variously as "vocational" or "industrial"), hence provision is made for the adoption of practical and applied drawing all through.

THE EQUIPMENT OF THE ART SIDE OF SECONDARY SCHOOLS

Assuming that children can begin to draw at the age of six or seven, they are, nevertheless, in our public elementary schools, taken in hand before that age, and, as soon as they enter school at all, are led to express their ideas and illustrate their lessons by manual expression in clay, sand, or chalk. Their efforts may be crude, but they are valuable; so much so that in

infant schools nearly half the time is spent in depicting objects and forms related to the object lessons. You may not be able to call it "drawing" in the strictest sense, but it is a useful initial preparation, and an excellent kindergarten occupation.

The work is carried out in this way. The children are supplied with large brown or dark millboards (impervious to water), which are placed in, or on, the desks, in an almost vertical position. The children themselves may stand or sit as convenient, and a stooping posture, of course, becomes impossible for them. On these millboards, or on black, brown, or white paper attached to them, they sketch in boldly with coloured chalks or crayons. These forms are reduced to the simplest lines and masses, and are never allowed to deteriorate into caricatures of elaborate and impossible shapes. The simpler the shapes the better, but they have to be relatively true.

As a preparation for pure "outline", the younger children pass through a course of "massing"; that is, they learn to rub the chalk on in masses, and thus *build up* forms. To such simplicity does this method lead that it is possible to commence in the "babies' class". These little mites start with a dot, and enlarge it to any given size, such as a bead, a pony, an

apple, and so on. The round, elliptical, and oval forms are taken first, because simplest, the motion in producing them being similar to the child's natural action of scribbling, only brought *within control*. These round shapes of various sizes are added to, and placed in juxtaposition, in such a manner as to form strings of beads or patterns. This is the commencement, and, by careful grading, "masses" are made to grow into many shapes without any thought of outline. Later, outlines are firmly added to these shapes, in order the more carefully to define them. This is exactly following out Nature's plan of evolving from the nebulous, the concrete and the specific. Lastly, in Standard I the preparatory "massing" as an aid to "outline" is dropped, and pure "outline" takes its place. This brings the child to the real commencement of drawing; and drawing means the due appreciation of, and power of rendering, a true outline. Any amount of filling-in and colouring may then follow.

The results of this free-arm method are most gratifying, and the children themselves thoroughly enjoy the work. It does away at one sweep with all minute eye-straining pencilling on squares, and supplies a more truly Froebelian substitute, bringing into play boldness and freedom. In the case of infants, straight

lines are only introduced by degrees. Actual straight-lined work is done separately as *ruler-practice*, worked from the beginning on plain white paper. Young children should not be expected to draw straight lines by hand very perfectly. In Standards I, II, and III the brown-paper free-arm practice is continued. As many natural forms and common objects are selected for examples as possible. Geometrical shapes are reserved for ruler-work. In Standard I, broadly, the year's work is based on long straight lines *combined with arc curves* to form shapes and patterns. In Standard II, the *O* or *elliptical curve* (done in one sweep) is introduced, and is combined with straight lines to form shapes and patterns. Standard III deals with the *compound* or *double-curve* applied to natural and ornamental forms, and the children are initiated into the laws of growth, diminution, repetition, and radiation. Free drawing of natural forms and artificial objects (mainly flat) in pastel or in water colour, applied to simple shaded drawings, and showing the backgrounds, is produced on white paper, concurrently with these free-arm chalk exercises on the larger scale. Similar forms modelled in clay are also worked as a further aid.

Above Standard III, free drawing and model are practised, and pen and brush work intro-

Free-Arm and Industrial Drawing

duced by degrees. All ordinary lessons, such as geography, composition, and science subjects, are, whenever possible, illustrated by little pen or pencil sketches in the margins of the papers or exercise. Geometry and scalework, pattern designing, the tinting of patterns, and scale drawing are also included in all the complete elementary courses; although in girls' schools of all grades the drawing course is necessarily less exacting, with a minimum of mechanical work. In many schools short blackboard practices are undertaken in addition to all other drawing, even in the infants' departments. Such practice is generally on the lines suggested by Professor Liberty Tadd, and is useful for gaining facility. As "gymnastics" may be an aid to "dancing", so this big work imparts certainty of touch, and versatility; it leads also to fertility of invention, yet cannot be said to constitute solely on this account an all-round and complete "drawing scheme". "Memory drawing" is periodically practised in all classes.

The secondary schools occupy a most important place in the training of pupils between the ages of fourteen and eighteen; and, with proper previous training, pupils in secondary schools should be able to produce very passable advanced drawing, and be able to qualify in the Royal Society of Arts examinations, Chamber

of Commerce examinations, Oxford and Cambridge Locals, and any others which may be attempted.

Hence the subjects to be taught (according to circumstances and requirements) might be enumerated as follows: Advanced pencil, pen, or brush drawing; advanced model, fully shaded; simple sketches of the human features or figure, of trees and landscapes from good examples; simple designing and colouring, applied practically when possible; still-life modelling in clay or wax; pen-and-ink drawing for illustration; wood-carving; stencilling; geometrical drawing and perspective; mechanical drawing for machine or building construction; blackboard drawing; a slight knowledge of architecture and architectural mouldings, and of the general history of art. Mechanical drawing for girls will consist of the practical setting-out of patterns for garments, and of the actual measurement of floor and wall spaces for domestic purposes.

Technical, grammar, and high schools generally have art classrooms (smaller or larger as the case may be), where a part, at least, of the above syllabus could be carried out. Private schools might attempt the same subjects, but with smaller classes, according to space at disposal. The services of specialists would certainly be required.

Introduction

Now for the equipment of a drawing classroom, to accommodate say twenty-five secondary-school pupils, working on these lines. This is a maximum number for one teacher. We will suppose the syllabus is as varied and comprehensive as possible, for the sake of detailing a full equipment.

ART CLASSROOM STOCK

FURNITURE

Cupboards, desks, racks, can be obtained from either: The London School Furniture Company, Messrs. Chapman & Hall, or Messrs. Geo. Hammer & Co. Obtain estimates.

Blackboard (42 inches long) *and Easel*. Chapman & Hall.

Free-arm Blackboards for Children, 6 in each stand; or Free-arm Blackboards on collapsable easels. London School Furniture Company, or Messrs. M'Dougall.

Chairs. Chapman & Hall.

Desks. London School Furniture Company, or Chapman & Hall. (Mr. Fisher's Combination Art Table; very good.) Woods' Patent Art Desk is also a simple contrivance. Illingsworth, Ingham, & Co., Ltd., Leeds.

An art room is far better without desks at all; they encumber the floor space, and are heavy for moving about. The small light "*Englefield Easel*" is to be

recommended instead. Twenty-five required, with chairs and drawing-boards.

Other Easels, say 3 deal, 6 feet high, and 3 School of Art easels. Reeves & Sons. Or the "Hatherly", Messrs. Winsor & Newton, is very steady.

Two Stools for Models, with adjustable top and back-ground. London School Furniture Company.

Picture Frames with movable backs. Chapman & Hall.

Twelve Stands for Casts. Chapman & Hall.

Complete Set of S. K. Models. Chapman & Hall. Additional various models can be obtained from same firm, and from The Educational Supply Association. Useful tin "common objects" can be selected very cheaply from "6½d. Bazaar" shops. They give excellent practice.

Drawing-Boards. Reeves & Sons.

MATERIALS FOR GENERAL PURPOSES

Millboards, brown paper (several sizes), cartridge paper, blotting paper, Canson paper, Michallet paper, Saunders & Whatman's paper. Apply to Strong & Hanbury, or Reeves & Sons.

FOR COLOUR WORK, ETC.

Pencils, crayons, chalks, stumps, indiarubbers, &c., from Messrs. Lechertier, Barbe, & Co., Reeves & Sons, or Rowney's. "Greyhound" pastels (Reeves) recommended.

Free-Arm and Industrial Drawing

Water-colour in boxes, refills, palettes, bottles and wire trays for same, indian-ink, ebony-stain, &c., Messrs. Reeves & Sons. Send for Reeves' booklet on Brush Drawing.

Compasses and mathematical instruments, Chapman & Hall. T-squares and set-squares, Reeves & Sons (for Geometry).

Teachers' large T-squares, set-squares, and compasses. Chapman & Hall (for Geometry).

Teachers' coloured chalks. Messrs. Rowney & Co. Also the Waltham Company, U.S.A.

FOR CLAY MODELLING (CLASS OF 10)

Two Bins for Clay. From local builder or contractor. Can be zinc-lined boxes or fixed slate-sided receptacles, having sloping lid, sloping forward.

Large Pails can be used instead.

White Clay, from any local potters, or from Messrs. Doulton & Co., of London.

Plasticine. Chapman & Hall, and W. Harbutt.

Adjustable Modelling Stands. Messrs. Lechertier, Barbe, & Co. (one or two only ever required).

Table with oak top, very strong, 2 feet high, for beating clay.

American Cloth. Thick Flannel. Sponges. Trowel. Spade.

From Reeves & Sons, the following:—

A pair of hard-wood Callipers, 10 inches long.

Modelling Tools: best boxwood, 7 inches. Nos. 1,

2T, and 3 most serviceable. Wire, 6½ inches. Nos. 2, 2, and 3 most serviceable.

FOR WOOD-CARVING

Patterns and Miss Rowe's books on Wood and Chip Carving, from the Manager, School of Art Wood-Carving, South Kensington, S.W.

Barnes's new work on Wood-carving for Students, published by Chapman & Hall, is also a valuable authority.

Set of wood-carving plaster casts, Nos. 408-19, Chapman & Hall's catalogue.

Tools from J. B. Addis, Tottenham Court Road; or R. Melhuish, 84 Fetter Lane, Holborn Circus.

Wood and Boards from Mr. Newson, 61 Pimlico Road, London, or from local dealer.

PHOTOGRAPHS, ETC., FOR DRAWING PURPOSES

For Nature Work. Teachers' Handbooks for Blackboard Sketches: The Newton Nature-Knowledge Handbooks, especially Parts I-III; recommended in conjunction with Nature-Knowledge Pictures for scholars of all grades. (Blackie & Son, Ltd.)

From NATURE (plants, &c.). The Arts Company, Derby. Or from the Welsh Educational Publishing Company, Merthyr-Tydvil, an excellent set of nature-study drawing-cards (box of twenty); these are actual

pressed specimens. From ORNAMENT. Selections from Kerry's admirable sets. Also The Arts Company set.

For *Standard Work or Senior Class Work*. Poynter's set of Charts known as the South Kensington Drawing Sheets (tinted). (Blackie & Son, Ltd.)

For *Ornament Studies*. Classic Ornament. Photographic Reproductions of South Kensington Casts. A clear and varied selection most useful for Monochrome or Grisaille work. (Blackie & Son, Ltd.)

Casts (not including human figure):

Elementaries. From Brucciani's catalogue:

Studies of ornament, 2315, Nos. 1 and 9 good; and 2584, Nos. 3, 5, 10, 11, 15, good.

An egg, 2811. Very useful. Group of eggs, 2813. Very useful. 5 balls, 2814. Very useful.

Elementaries (from Chapman & Hall's illustrated catalogue. This catalogue is most useful):

New Century Casts, Nos. 12, 13, 17, 18. Could be used instead of one of Brucciani's elementary sets quoted above.

For *Shading*. Shaded drawing of Models and Ornaments for Class Teaching (24 sheets), by Lewes R. Crosskey. (Blackie & Son, Ltd.)

For *Advanced Shading*. Nos. 448, 449, and 451; and from the New Century Casts, Nos. 1, 3, and 5; and 333A.

For *Acanthus Ornament*. Steven's spandril, 331.

For *Shading and Clay Modelling*. Nos. 14, 17, 56-59, 382, 384, 393, 394, 397, 398, 426, 427, 436, 437, 438, 439, 454, 455. These can all be recom-

mended, and selections can be made from them by help of the illustrated catalogue.

For *General Purposes and Memory Sketching*. Consult the well-known Vere Foster's *Complete Course of Drawing* (18 parts). (Blackie & Son, Ltd.)

For *Lettering*. Vere Foster's Medium Series, No. I (plain lettering) and No. II (ornamental lettering). (Blackie & Son, Ltd.) Percy J. Smith's portfolio (Batsford), and Graily Hewitts' Copybooks (Hodder & Stoughton). Lettering booklets (Bacon & Co.).

For *Painting in General*. Vere Foster's Water-Colour Books (Advanced Scholars). (Blackie & Son, Ltd.)

SOME BOOKS OF REFERENCE

Chalk Drawing on Brown Paper, in book form. (Charles & Dible.)

Nature Forms—a Book of Free Drawing, by Henry F. Wyse. (Charles & Dible.)

Brush Drawing, by J. W. Nicol. (Blackie & Son, Ltd.)

Brush Drawing Sheets (Sets I-III), by J. W. Nicol. (Blackie & Son, Ltd.)

Brush Drawing Cards, by J. W. Nicol. (Blackie & Son, Ltd.)

Brush-Work and Design, by Frank Steeley. (G. W. Bacon & Co.)

Manipulation of the Brush—S. Thorogood, A.R.C.A. (G. Philip & Son.)

Elementary Brush Studies (of naturalistic description)—Eliz. Yeates. (G. Philip & Son.)

Free-Arm and Industrial Drawing

Elementary Art Teaching, by E. R. Taylor. (Chapman & Hall.)

Decorative Brushwork and Design—Henry Cadness. (Batsford.)

Plane Geometry, by J. Carroll. (Burns & Oates.)

New Art Geometry, by Steeley and Trotman. (Bacon & Co.)

Elementary Perspective and Advanced Perspective, both by Lewes R. Crosskey. (Blackie & Son, Ltd.)

A Text-book of Sciagraphy, by J. H. A. M'Intyre. (Blackie & Son, Ltd.)

Perspective, by J. Carroll. (G. W. Bacon & Co.)

Perspective, by Petty. (G. J. Arnold & Son.)

J. Humphrey Spanton's *Geometry and Perspective* are very useful for advanced scholars. (Macmillan & Co.)

Perspective, R. J. Hutton. (Chapman & Hall.)

Building Construction, by Mitchell (Adv.). (Batsford.)

Machine Construction, by D. A. Low. (Longmans, Green, & Co.)

History of Architecture, by Banister Fletcher. (Batsford.)

Manual of Historic Ornament, by Richard Glazier. (Batsford.)

Midgley and Lilley. *Studies in Plant Form and Design*. (Chapman & Hall.)

Elementary Design—Charles W. Dawson. (Chapman & Hall.)

Wood-carving and Chip-carving, by Eleanor Rowe. (Batsford.)

Landscape Painting, by J. M'Whirter, R.A. (Cassell & Co.)

Marine Painting, by W. L. Wyllie, A.R.A. (Cassell & Co.)

The Elements of Drawing, by Ruskin. (George Allen.)

Hints on Learning to Draw, Hutchinson. (Macmillan & Co.)

Hunt's Talks on Art. (Macmillan & Co.)

Figure Drawing. Hutton. (Chapman & Hall.)

Considerable satisfaction is afforded by the knowledge that these methods of teaching revert back to those which some years ago Mr. Spencer propounded in his *Education: Intellectual, Moral, and Physical*, and are also in conformity with the ideas of Professor Ruskin and Professor Haeckel on this point. The opinions of three such men—philosophers and teachers all of them, and renowned specialists in other directions, in science, art, and literature—must be accepted as of the greatest import. They are all agreed that colour-work should be allowed to even the youngest children; that infants should be taught more by means of mass than by outline; and that they should be encouraged to draw things about them that interest them, rather than cold, mechanical, unsympathetic arrangements of purely geometric lines.

The employment of coloured chalks has

Introduction

enabled teachers to follow out these injunctions with success. By means of coloured chalks pupils now learn to draw and colour simultaneously; the chalks thus possessing a double advantage. Afterwards children of six and seven may reasonably start painting.

FREE-ARM DRAWING

This term has in certain quarters been somewhat misconstrued, and even thought to be a misnomer. But whatever be the interpretation put upon the term, it may, at any rate, be considered synonymous with free drawing of all kinds executed to a bold scale on surfaces which are almost upright and well away from the eye, in the manner in which the artist works at the easel. It includes, therefore, blackboard drawing, drawing on large slates or millboards placed vertically in desks or on small easels, crayon or charcoal drawing on white or tinted paper attached to an upright surface, and painting and brushwork.

It is a particularly suitable occupation for young children, both on hygienic principles and for the reason that it enables the pupils to accomplish more in the way of actual drawing than could possibly be attempted by any other method.

Its very general adoption at the present day is very largely due to the prominence given to drawing in infant schools during the last few years; no surer educational method having been discovered than this, for bringing out the child's faculties of observation, selection, and manual expression. The drawing of objects or animals all angularly on squared paper (of very small squares) has had to be relegated to the obsolete, mainly because it did not give the child any power of actual drawing, any freedom of movement, any correct perception of form, any idea of grace of line; it constrained him to rivet his attention on his points and squares, inanely counting them up, and meanwhile forgetting all about the drawing of the true shape; and lastly, because it was a sure way of spoiling his eyesight.

Teachers have themselves, long ago, found out the value of blackboard drawing in their own case. It gives boldness and confidence where before only temerity of style existed, and it has helped them to develop a freer style on paper.

We may safely argue from this that Free-Arm Drawing is a simplification of the ordinary drawing, and that it is also an aid to it. Moreover, the scholar and the teacher work in identically the same way, line for line, and with the

Free-Arm and Industrial Drawing

same medium. This is another distinct advantage.

Besides, chalk affords a very ready means of expression, being a soft medium used on a hard surface; and the somewhat hard and unsympathetic pencil point can be avoided for free drawing until it can be more profitably employed. At the same time, the finer and more mechanical work ought not to be neglected entirely, but should be carried on concurrently with the free-arm, particularly in the lower classes, in the form of *ruler-work* executed on white paper with the black-lead pencil. Ruler-work helps the young child to obtain correct ideas of size, to make accurate measurement, to draw really correct straight lines, and it breaks the ground for the first steps in design, or, in other words, "industrial or vocational drawing". In the upper classes it is carried on as scale and measurement drawing, and as geometrical drawing. Mechanical drawing should on no account be dispensed with, in any school department.

APPARATUS

A few words are necessary on the use of the millboards and other required apparatus. Free-arm is worked in several ways:

(a) On millboards (about 20" x 12" or

17" x 12") or on large slates with teachers' chalk, white and coloured, or with short slate pencils, the pupils sitting well back in their desks.

(b) On brown or black paper attached to millboards by two bicycle clips, white or coloured teachers' chalks being used for drawing, or, in the case of careful and more expert children, coloured crayons.

(c) On white cartridge paper (about 15" x 11") instead of on brown paper. This for more advanced scholars. Charcoal, short conté crayons, coloured crayons, or blunt, short, soft lead pencils may be employed.

(d) On blackboards, or on screens covered with brown paper or dark American cloth. Teachers' chalks or large brushes charged with white paint or whitening may be used, and the scholars should be standing.

Freehand drawing worked in books had always better be done on a sloping desk (slope about 45°), and should be produced with a flexible wrist. *In free-arm the movement is from the shoulder, the arm being extended not too stiffly, and the wrist also coming at times into play.*

It is advisable in using the washable millboards to work the ordinary practices upon them; and at least once a month to supply *brown paper* in order to have a permanent exercise,

Introduction

13

which exercise may be one previously practised on the boards. These should be carefully kept by the teacher. It may sometimes be a memory drawing. No rubbing out at all should be allowed on the paper. In fact, the scholars should be trained to sketch in leading lines faintly and then add the final lines a little stronger. False lines must remain, though they should always be corrected. An exercise may, however, be *entirely* rubbed out and redrawn at the teacher's direction. Forty minutes' lesson is quite long enough, including the giving out and the collecting of materials, and frequently two exercises can be done in that time.

The value of the brown surface readily becomes apparent when it is seen that no dirtiness is visible upon it, a disfigurement which almost inevitably occurs in the work of very young children if they draw on white paper to a bold scale.

Millboards are of two sizes, made to fit into the slate-slots in the desks. They are washable, and if they rub up into a greasy condition (as they only require actual washing at intervals) it has been found a good thing to wash them with warm soda water, or water and "blue" (household). The accompanying diagrams will show how to support them on the desks.

Fig. 1 shows a flat-topped infants' desk having neither under-shelf nor slate-slot. A light wire easel is inserted into two sockets fixed on the back of the desk, and the millboard rests on the easel.

Fig. 2. An elevation of a similar desk-top;



Fig. 1

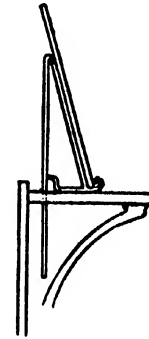


Fig. 2

but in this case two holes have been drilled through it, and the long legs of the easel are passed through these holes.

Fig 3 shows an arrangement for desks used by seniors, where two millboards are supplied to each scholar. They are in this case the half-sized millboards. One is placed diagonally in the *slate-slot* (or a slate would do placed in the same position), and the other rests against it,

Free-Arm and Industrial Drawing

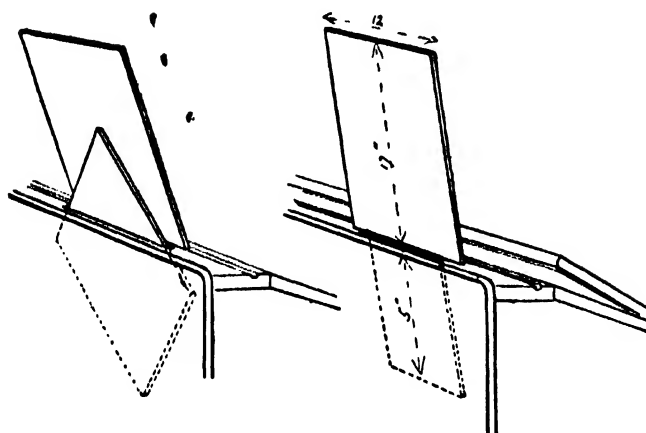


Fig. 3

Fig. 4

standing in the *pen-groove* (which may require a little deepening if very shallow).

Fig. 4. A similar desk, but showing the use of the full-length millboard, a portion of which (cut out to fit the slot) passes below into the desk. The desk-flap may be turned back as indicated. In single locker-desks, the board may rest in the locker and against the open lid.

Note.—Most teachers prefer fig. 3 method, as it gives a firmer surface upon which to work, the millboard not being so liable to sway, and it gives the board a better slope. There is also an economy in millboards if the slates can be made to serve as supports. It is better, if pos-

sible, that the supporting millboard should be placed cornerwise in the slot as shown.

Fig. 5 shows an arrangement for another make of desk, in which the flap, with its small ledge on the under side, is utilized. The millboard (half or full size) stands on the small ledge (which will require grooving), and the flap itself is propped up at either end by a small removable wedge-shaped block, shown at x. This figure also shows the paper attached to the millboard by the two bicycle clips.

Note.—In working, the scholars should

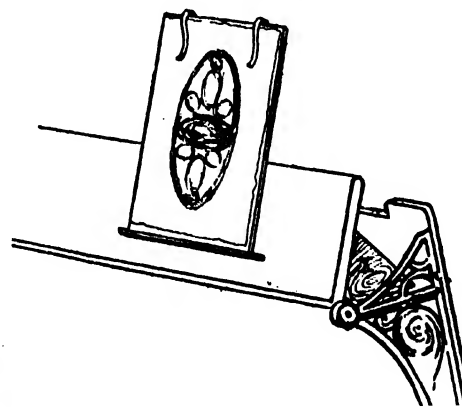


Fig. 5 a

either sit or stand, as most convenient. Their age or size will help the teacher to determine which attitude is best. Very young infants should, however, always sit, or they will get too tired; except at short blackboard drills, when they must stand. In some exceptional cases, where the desks are of such a nature that none of the above expedients can be adopted, the scholars must be content to rest their millboards or slates on their knees, and against the edge of the desk. It is, however, a method to be avoided whenever possible. Senior scholars may be allowed to work on blackboards or screens, in which case they will, of course, stand, and in a position well away from the board. The best arrangement is to have the blackboards arranged around the schoolroom wall in grooves, or on movable stands or easels, which can be arranged in a circle or semicircle, the scholars standing inside. Stands and easels are now supplied with blackboards on either side at a suitable distance from the floor; and these can be wheeled or lifted into position. There is a difficulty, however, if the scholars throughout the class, work on the two sides, because this necessitates the stands being placed in lines (particularly if the class be a large one), and so the scholars are prevented from seeing the teacher demonstrate. It is better to have out

the class in two divisions, or smaller relays, so that they may work on one side only at a time, and hence allow of the racks or easels being arranged around the room or hall as suggested.

MASS DRAWING

This branch of Free-Arm Drawing peculiarly lends itself to infants' work; because it leads them to see things in "mass" or as concrete solids, and then to express these impressions in "mass", just as they appear to them. This process prepares them for a more just appreciation of outline drawing, *which they should start as soon as they have found out how to see things aright in mass*. When a chimney-pot stands out against the sky, or a human figure is seen on a hilltop, or a tree branch waves before the setting sun, we see all these things distinctly in mass, or as silhouettes; in other words, we see them as shadow pictures. In fact, every visible object about us appears to us, not as an outline, but as a patch of colour, or as a "mass". Now, coloured chalk, owing to the readiness by which it may be rubbed over a surface, can soon be made to express the *mass and contour* of an object by one and the same operation, and that very rapidly. Hence a valuable exercise is at once ready to hand. Not only is it closely

allied to painting (which is entirely a system of massing with the brush), but it is also closely allied to other kindergarten exercises, as e.g. clay-modelling.

In later stages of senior work, it reappears under the form of shaded pastel drawings of groups of objects on white paper, or similar groups on brown or tinted paper; in which case the lighter pastels are used to express the light surfaces, and the darker ones to depict the shadows.

Ruskin it was, who strongly recommended pupils of about fourteen years of age, to pin a branch of foliage to a white vertical surface, and then sketch it in, stems and leaves, in black patches on white paper. This would give the appearance of the branch against the sky, or its silhouette, and would considerably help the scholar to a right conception of the growth and general appearance of the branch or twig.

A saner representation of objects is also possible for very young children by this method; and quite elaborate forms, such as a church, or a tram-car, can be reduced to comparatively simple masses, and therefore made easy for them to attempt, by this building-up process.

For the earliest efforts of young children it is peculiarly suitable, and it appears to possess a distinct fascination for them. The earliest

"massing" consists in building up forms, just as objects can be built up in clay. The "dot" is the starting-point, and that is made to grow into larger shapes, by enlargement and other additions. It is quite an evolutionary or accretive process.

Afterwards, when the scholars grow older, they are taught to draw a good outline right off at the beginning; because they must necessarily grow experienced in outline drawing and in the *representation of a mass by an outline*. They may then fill in this outline with chalk by carefully shaded lines as an embellishment, and to give a more solid appearance to the object. The order is thus reversed. This filling-in is, however, by no means essential. If also there should at any time appear any tendency to a recurrence of tiny ill-proportioned outlines, a "massing" exercise on the representation of the object is the best corrective.

"Massing" must never be allowed to degenerate into "messaging", *for there is a danger in making mass drawings too large*. Six to eight inches in length is quite sufficient for paper work—any size, however, for blackboard work. For Blackboard Massing, the side of the stick of chalk may be used with advantage. Nor must the child be allowed to rub in the chalk too violently, as it will be only too prone to do.

This tendency can, with care and discipline, soon be eradicated; and with adequate supervision the children can be prevented from making their clothes dirty, just as dirtiness in clay-modelling is a thing which may be avoided.

In a good deal of nature study, *e.g.* plants, twigs, leaves, flowers, shells, insects, &c., line and mass have frequently to be combined, adding to the effectiveness of the representation.

"Massing" may be done on white paper, as well as on brown, in which case coloured crayons, and not coloured chalks, should be used.

It is advisable, as early as possible, to supply the children with varied coloured chalks—two, three, or more, according to circumstances,—for in this lies half the value of the work; and already it has proved the means of discovering, in their earliest years, children who have been partially or wholly colour-blind. At least the three primary colours should at first be learnt, and so on to a dozen colours, including brown, grey, and black.

"Massing" is invaluable for ornamental work, and therefore is truly an aid in the direction of "Industrial Drawing".

Lastly, "Massing" does away with all hurtful minute kindergarten drawing on tiny squares, in the old-fashioned way, a method which has

been so strongly condemned by some of our leading oculists.

MEMORY DRAWING

Periodic tests in "Drawing from Memory", should be set at frequent intervals; consisting of the drawing of some object, natural form, or incident after a previous close brief scrutiny. The drawing should then be made immediately; though there is also no harm in allowing children, in spare moments, to reproduce *anything* they have previously observed and remembered, providing this latter exercise be considered rather as an occupation for spare moments than as a true memory test.

Much of the value of Mr. Ablett's system, as shown in the awards granted by the "Royal Drawing Society of Great Britain and Ireland", is due to this exercising of the memory and this training of the eye to quick and intelligent observation.

Free-arm work readily lends itself to quick repetition in a manner helpful to Memory Drawing.

A certain lenience has to be shown towards memory drawings, as exactitude cannot wholly be expected in them. This fact at once proclaims the true province and scope of memory

work, and, far from being a disadvantage, compels the scholar to exercise his inventive faculties to invent the details he has forgotten. It is not, as some would affirm, the only true method of drawing worth pursuing. Rather, as Boisbaudran points out, the power to draw, means, from first to last, the power to represent things *seen, as seen*, drawn from the actual object. The foremost artists have always required models, and it is this truth to the things seen, which has given so much value to their work.

Memory work, therefore, cannot be substituted for the actual drawing lesson, with its explanations and demonstrations. It holds a place, in fact, analogous to that which mental arithmetic holds to ordinary arithmetic. Its importance, now fully recognized by all, is being emphasized on all sides; and at one of the International Art Congresses, dissertations on this topic were not devoid of helpful suggestions, *e.g.*:—

“Drawing from memory, encouragement and awakening of the fancy, should be sought after.”

“Next to the classwork, a sketchbook ought to be introduced, in which memory drawings and the illustrating of stories should be practised, so that the fancy of the pupil may have perfect freedom.”

The plan of some schools of giving out drawing-books to scholars in all classes, for the production of home drawings, recreative drawings, and memory drawings, to be inspected by the teacher periodically, has led to some wonderfully encouraging results; for it not only affords a pleasing diversion, but serves also as a useful supplement to the school drawing lessons, particularly when these unaided attempts are leniently criticized by the teacher, or praised, as the case may be. The scholars learn to prize greatly these books.

Memory drawing, properly applied, leads to spontaneity of expression, as may be witnessed in the wonderfully graphic art of Japan; an art founded almost exclusively upon keen observation and memory renderings, and one which, in consequence, is characterized by the utmost freedom and fertility of invention.

Description of the Plates

PLATE I

SIMPLE EXERCISES ADAPTED TO CHILDREN
BETWEEN THE AGES OF THREE AND FIVE

No. in class, 25-30. One Teacher. Lesson, 20-40 minutes.

Aim of Teacher.—(1) To enable the scholar to place a point correctly in any required position, and afterwards to develop it to any required size. (2) To judge rightly of size and proportion in solid masses placed in juxtaposition. (3) To learn how to construct complicated patterns, bit by bit. (4) To stimulate the imagination by using simple units to stand for well-known forms.

The practices will form the earliest exercises in development of the sense of orderliness, neatness, and arrangement, and in the quickening of the imagination.

It is advisable to supply coloured chalks to the children as soon as ever they have learnt these first lessons in proper arrangement. Until then one colour will do.

Each division of these plates represents at least one-eighth the actual size of the brown sheets used by the scholar; and not more than two drawings at most should ever be made on one sheet. This latter remark applies to all the examples in this book. None should ever be

worked to a smaller scale than that. The colours used are also only suggestive. In natural objects they should approach as nearly as possible to the original. At the same time, too much anxiety need not be shown to get them absolutely true; because the tints of chalks are decorative and therefore necessitate a somewhat conventional rendering—not at all a drawback. In fact, when used on a brown ground, they at once produce, not a literal, but a decorative rendering, which in the highest degree makes for the cultivation of pure taste in colouring and in decorative qualities. Good chalks or crayons should be used, as supplied by Reeves or Rowney. Greasy ones, or crudely coloured ones, should be avoided.

No “lines” of any kind need be employed until Stage IV is reached, and then they should only be of a subordinate kind, and used almost without the child’s cognizance of their presence. Stage V might possibly conclude the first year’s course. It will be apparent that these examples serve to aid the pupil in his first lessons of counting.

Concerning the method of increasing the “dot” or “point” to any required size, which is the fundamental principle of this scheme, it may be remarked that it is wholly in con-

Free-Arm and Industrial Drawing

formity with the untrained child's first natural impulses to scribble (the first efforts to draw).

It should be remembered that all the examples on these plates could be made and built up in clay.

THE STAGES

Stage I will require much practice, but must be thoroughly mastered.

Stage II will also require much practice, but it too must be thoroughly mastered. Try a series of circular objects, making the objects increase and the reverse (vertically and horizontally). There is no occasion to pile on the chalk, in fact this tendency should be discouraged, and in time quite overcome.

Stage III shows how numerous patterns may be built up from the centre.

Stage IV shows how rectilinear forms may be suggested. The teacher should always be careful to call the balls by some name, as, e.g. marbles, cherries, apples, oranges. The colour should correspond to the object used to build up the pile.

Stage V. "Lines" which determine direction are for the first time here brought into use. Children attempt these well when used in this secondary sense. These exercises are good

tests in "relative proportioning". They are mostly bead patterns, but (a) is a piece of seaweed. Stars and starfish can readily be formed; in like manner.

Stage VI. Rectilinear shapes are here brought into requisition, and should be termed bricks, blocks, or stones; and if a set of toy bricks be handy, it should certainly be employed to illustrate the lesson. It is a very important exercise. The method is to lay down strips drawn in the long direction of the shape, side by side, in a series, to give the form roughly. Finish off by going round the shape and correcting the outline. Fill in any empty spaces, and make it look quite solid.

Stage VII shows the employment of these bricks in building up architectural forms. Refer to toy-brick erections, which might be built up before the children, in order to demonstrate. A row of posts, a row of columns, a flight of steps, the school gate, the playground shed, a pier of masonry with a ball on top, so common in old gates, suggest themselves. Again, objects composed of several juxtaposed rectangular forms, such as bonbon crackers and ninepins, give a totally different series of examples.

Memory Drawing: as, e.g., show a row of two apples, three cherries, and five green peas;

make a pile of twelve snowballs; make a star pattern; draw a tambourine; build a pyramid (after explanations); show a row of nine pins, with the shooter; draw a bunch of grapes, or a cluster of red currants; draw a pearl necklace; draw a drinking fountain, &c.

PLATE II

SPECIMEN EXERCISES SUITABLE FOR CHILDREN OF FOUR AND FIVE YEARS OF AGE

No. in class, 30-60. One Teacher and perhaps one Assistant.
Lesson, 30-40 minutes.

Aim of Teacher.—(1) To enable the scholar to move the chalk freely in different directions. (2) To correlate the drawing lessons to other studies. (3) To draw common objects. (4) To notice the effects of repetition.

Note.—It must be most distinctly borne in mind by the teacher, that, in setting common objects for infants of all grades, the object, even if a round one (that is to say, in plan), should always be represented in pure elevation and not in perspective.

Scholars should be taught the *true shapes* of objects, before they learn their perspective appearance.

THE STAGES

Stage VIII can with advantage be taken while the children are learning their alphabets and their numerals. The borders should be large, and the border lines may be previously ruled by a senior monitor or pupil teacher.

Stage IXa can be taken in conjunction with the teaching of written characters. The style of writing will be the one in vogue in the school. Borders as in last stage.

Stage IXb is only a variation on the last exercise in order to practise the written line as applied to drawing, pure and simple.

STAGES VIII, IXa, and IXb are concurrent; VIII and IXa being taken by preference not in the drawing lesson, but during the teaching of alphabets and writing.

Stage X. The first exercises in the use of *long straight lines*; drawn firmly and of a good thickness. Select only such illustrations as are made up of thick straight lines. This stage may be concurrent with the last two stages. Each line is drawn with one stroke, to the full width of the chalk, and by exerting a uniform pressure throughout its entire length. Chairs, tables, bedsteads, clothes lines, swings, whips, &c., can be taken in this way. A very important

stage (analogous to stick laying), which cannot be practised too often.

Stage XIa. The first of the two sections shows the proper method of constructing objects, stage by stage, by drawing the main line or mass of the object first, and adding all details and enrichments afterwards. Different colours may be used for different details or parts. The chalk must not be ground into the paper too heavily. In the second section typical examples are shown. These examples show the employment of both *thick* lines and constructive masses. The teacher should analyse each of the objects here given, for the purpose of discovering their chief main lines or masses. Whenever possible have the actual object before the class, and describe fully its parts and appearance; then start by drawing its main feature. Note, for instance, in the saucepan, that the body comes first, then lid and handle. In the child's spade, the long line for handle comes first; ends added. Toys of all kinds give a wide range of appropriate subjects, including even dolls.

The next stage will be found on Plate VIa.

Memory Drawing: Draw a ladder; a finger-post; clothesprop and line, with clothes; a bedstead; table, with chairs, &c.; blackboard and stand, &c.

PLATES IIIa TO IIIc

SUITABLE FOR CHILDREN FROM FOUR TO SIX YEARS OF AGE AND UPWARDS

These plates and some of the succeeding ones are introduced here in order to give examples of the further application of the "massing" method to the object lessons. They furnish suggestions for the teachers' blackboard illustrations, and it is not pretended they could be used indiscriminately. Only the more simple subjects could be set for the younger children. They give some idea of the variety of topics. When a tree is drawn, some details should follow on a large scale: e.g. leaves, fruits, cones, &c.

Wearing apparel, as well as boots and shoes, can easily be done, e.g. stockings, gloves, hats, muffs, &c.

PLATES IVa TO IVc

SUITABLE FOR SCHOLARS OF THE AGE OF FIVE TO SEVEN AND UPWARDS

Object-lesson examples are here continued.

Buildings.—Draw in first a simple block (see earlier exercises) to represent the main body of the building. Then add roof, chimneys, battlements, mouldings, windows, &c., in

order of importance. These examples are but elaborations of the rectangular block, with perhaps two or three smaller blocks added. Gable ends of roofs, seen from the side, are only vertical lines—the roof itself, therefore, appears as a rectangular block. Many buildings could be thus typified, as, e.g. bridges such as Tower Bridge, or The Tower of London, Big Ben, &c.

Vehicles, &c.—These also are but elaborations of some elementary and fundamental block forms, perceptible in most of the examples. The rectangular block is seen in the engine, the tender, the railway carriage, the tram, the omnibus, the pantechnicon, and the bathing machine. In drawing the wheels it is enough to put in the circle and the axle, leaving the imagination to supply the spokes, which are a fruitful source of error in most children's sketches. If the horses *must* be put in (and there is much danger in trying this), consult Plate X.

PLATES VA TO Vc

SUITABLE FOR CHILDREN AGED SIX OR SEVEN
AND ABOVE

Object-lesson examples further continued.

Tools and implements form excellent practice, combining line and mass. They also

make good memory tests. Scissors and other work-basket articles could be set to girls.

Natural phenomena can be represented without much trouble in a somewhat simplified and conventionalized manner, as here depicted. The lines should be vigorous and of varying thickness; shading should be left severely alone. These examples are only *effects*, they are not *views*.

Geographical terms, such as island, mountain, lake, gulf, &c., can be readily illustrated by simple "massed-in" pictures.

PLATES VIA TO VID

SUITABLE FOR SCHOLARS FROM SIX TO SEVEN
YEARS OF AGE, AND EQUIVALENT TO THE
WORK OF STANDARD I

No. in class, possibly 60. One Teacher.

Lesson, 40-60 minutes.

Aim.—Gradually to prepare the scholar to render a correct idea of "mass", by firm and direct outlines only.

When these practices have been well carried out, "filling-in" may be added; produced, however, not by *random scribbling*, but by parallel lines closely and carefully drawn in some one given direction.

The free circle should form the main basis of most of the copies set.

THE STAGES

(continued from PLATE II)

Stage XIb. A good transition exercise between "massing" and pure "outline", serving as a distinct aid to "outline", is here exemplified. Pale shadowy forms of the general shape of the objects are massed in, and a clearly drawn outline is afterwards firmly added to define the shape, with all its irregularities, or to mark its details.

Stages XIIa and XIIb bring the scholar at once to pure outline as a means of representing the mass. In some schools the copies do not consist of outline charts, but of large cardboard shapes cut out to the shape of the copy. This is an excellent idea when dealing with young beginners. They see better then what the outline is really intended to represent.

Outlines should always be as large as possible.¹

¹ At this period the most valuable examples that can be set are those which are based on the *circle*. The circle should be practised in all sizes but without any guiding lines or dots, just simply as a *free figure* of some specified proportion. Such circles may form the foundation shape of many objects, and by the addition of a few extra lines be easily transfigured, as in the case of the "globe" here shown. Such objects as the following will readily occur to mind:—Balloons, dumb-bells, bottles, gold-fish jars, clocks, watches, pendulums, children's hoops and handles, footballs, gongs, tambourines, cart wheels, pair of bellows, water-mill, certain fruits and vegetables, musical instruments like guitar or banjo,

Stage XIII shows the final stage of drawing in Infant Schools. Here a good outline is first obtained; it is then "filled in" or "hatched in" with closely drawn lines, to strengthen the mass idea and to add the local colour.

Plates VIc and VIb are to exemplify that "massing" may be used in connection with "brush-work".

Memory Drawing: Draw a mariner's compass; a grandfather's clock with a big pendulum; a weather-glass; opera-glasses (front view); the moon, with its chief markings; a lady's bangle; a suspended frying-pan; a circular mirror; a square photo-frame with circular opening; a bull's-eye target; a football; the Big Wheel at Earl's Court; a circular Chinese-lantern; a bunch of keys on ring, &c.

PLATES VIIA TO VIID

SUITABLE FOR CHILDREN OF ALL AGES

These plates and some of the succeeding ones are intended to illustrate the manner of working "nature" drawings.

garden roller, circular hanging station-lamps, &c. The circle may be thickly drawn, and, as a preliminary, may be lightly massed in first as on Plates Ia and Ib. This practice of the circle is intended to lead up to the rendering of the more confined curves of Standard II.

Whenever possible the teacher should have at hand the original, be it flower, leaf, fruit, vegetable, or even living creature.

As a rule, "nature" drawings by young children are best made from the teacher's blackboard rendering of the model before them; the teacher working step by step and explaining the different parts. The model ought to be pinned up, if possible, on a sheet of paper near the blackboard drawing.

On the other hand, if plentiful supplies of leaves, &c., are to be had, it is a good plan to supply them periodically all round the class, and the teaching will then be largely individual. But this plan ought not to be too exclusively followed; it is by no means a perfectly satisfactory "class" method, though it may be suitable for small classes of children.

Section A of this plate exemplifies pretty clearly the correlation of processes in various Infant occupations. Some schools are able to take up all, and for this they are to be congratulated: other schools have to content themselves with two or three of the processes only. The great fact to bear in mind is that they are all related, and that the one should help the other. Such a complete scheme fully satisfies requirements both manual and artistic. It is

a pity that a parallel series of exercises is not more frequently carried on right through the *Senior* departments. It is a logical and eminently reliable sequence. Two other parallel exercises are the production of "pencil" and "brush" outlines on white paper; making a total series of six processes altogether.

CHALKS REQUIRED FOR NATURE WORK

Naturally "nature work" demands a greater assortment of colours than do other exercises, for the reason that it is well to try and approximately match the colouring of the originals.

Occasionally only can one colour be safely used on top of another to change its hue. It will be some achievement if the scholars are able to distinguish properly the primaries, and a few other principal colours, such as green and brown.

Flowers, Leaves, &c., their treatment.

—It is continually necessary to combine outline and mass in rendering such, and stems are best always shown as single strokes of varying thickness, and not as double outlines. Always commence with the stalk or midrib, which is the determining line of direction, then add the most important feature, be it flower, leaf, or cluster of leaves. In Plate VIIc the Michael-

mas Daisy is shown in its three stages, and the variegated holly leaf, below it, in its two stages. All strongly serrated or toothed leaves should have their centre mass first mapped in, and their serrations added on the outside of this central mass. Leaves should be practised at times on a large scale in outline (both individually and in clusters), followed by the same examples on a small scale in brush outline. They can be made very effective. Veins should be kept subordinate, and side veins should never quite reach to the edge of the leaf. Nodes (in stalks) must be carefully attended to.

Nuts, Fruits, Vegetables, &c., their treatment.—They form, almost without exception, exceedingly good practice in mass work, as here indicated. High lights can sometimes be effectively added, and a few decided touches will often help to impart a look of vitality.

PLATES VIII A TO VIII D

SUITABLE FOR SCHOLARS OF ALL AGES

(Nature studies continued)

Crystals and Shells.—Snow-flake crystals of the simpler star patterns are interesting practice. Star-fish are somewhat similar in

construction. Shells of all varieties give an endless source of pleasure. Draw actual specimens whenever they are accessible.

Insects.—Use school-museum specimens if procurable. Note always the three main divisions of the body, and that wings are adjusted to the second division, as also the legs. Draw the body first.

Birds.—Eggs, singly or in groups, are excellent preliminary practice in this branch. The egg is an ellipse, thickened considerably at one end and pointed at the other, so becoming *oval*. Individual eggs are worthy of study on account of their colouring and markings, and groups of eggs look well if naturally arranged in nests or among grasses, &c.

Next point out that the egg-shape practically governs all bird forms; the head, so to speak, being attached to the thicker end, and the tail to the pointed end.

Hence start always by drawing the body, endeavouring to keep in mind the general egg-shape within it, and noticing in what direction this seems to lie, because it will also determine the direction of the bird's body. After this add the head by placing an ellipse or 0 in the proper position; then connect with neck, and add the tail, wings, and legs.

As a succeeding exercise to the practice of the egg, a newly-hatched chick might come next, as here shown, on account of its simple outline, and its close resemblance to an egg.

Draw distinctions between the shapes of birds, as, e.g., the squat-like goose, the graceful swan, the elegant swallow, the dignified stork.

Show comparisons between well-known and often-seen ordinary birds, as, e.g., the fluffy sparrow (Plate VIII c, second row), the slender canary (third row), and the perky robin (third row).

The third figure on Plate VIII D is a Japanese rendering, in line and mass, of a flying bird. Being conventionalized, it becomes ornamental. Teachers can study Japanese renderings to great advantage.

The small outlines at the bottom of the plates give the main governing lines and masses of some of the examples just above them. For a mere outline rendering of the bird, they would almost suffice in themselves; the principle being to reduce the number of lines to the fewest possible.

PLATES IX A TO IX D

SUITABLE FOR ELDER INFANTS AND SENIOR SCHOLARS

(Nature studies continued)

Bird Outlines.—These should be reduced to the very simplest and fewest lines possible, as, e.g., in the small drawings on Plate IX B.

(A) is merely an egg and an ellipse with a few additional touches.

(B) shows how the beak should at first be carried through the head, determining where the eye should come, viz., never *below* the beak, but on a line with it, or just above.

(C) shows the continuity of certain lines, as in forehead and eyebrow.

(D) the simplicity of a Japanese rendering.

We must endeavour thus to simplify, just as the ancient Egyptians and the modern Japanese have contrived to do so wonderfully in their lifelike paintings, so full of action and so correct in likeness, and yet depicted with such masterly simplicity.

Details such as talons, and the comparison of heads, form an interesting series for object lessons; distinctions of construction being noted.

Fishes, Reptiles, &c.—The drawings speak for themselves. Animals are at all times

very difficult to draw, chiefly and perhaps solely on account of their legs. Those, therefore, which are devoid of legs, or of any very detailed accessories, are those which should in preference be selected. Snakes and certain fish can be reduced to simple forms, and animals like the seal and tadpole; any, in fact, whose legs or feet are not conspicuous, for therein lies the stumbling-block.

PLATES XA TO XD

SUITABLE FOR ONLY THE MOST PROMISING
INFANT SCHOLARS. CAN ALSO BE MADE
USEFUL FOR SENIOR SCHOLARS

(Nature studies continued)

Beasts, &c.—In representing any of the larger quadrupeds:

(1) Always draw the creature in pure side elevation, *stand it on an imaginary straight line*, and *make all the feet touch this line*, unless where a leg is raised, or a simple perspective view is chosen.

(2) Always start by drawing the body and head first, adding afterwards legs, tail, ears, and other details. This rule applies both to mass and line representations as shown.

On the two top lines of Plate XA will be seen three stages in the case of three typical creatures. The first is the finished mass drawing, the second shows how to proceed at the start, and the third gives a simplified outline rendering. Only by some such method of procedure will caricatures and anomalies be avoided.

Lower down are three beautiful Egyptian outlines of living creatures, worthy of study and emulation for their simple directness. Each line tells as part of the construction.

Domestic, &c.—Some few domestic animals, and a few studies of heads in outline, are given on Plate Xc. The mouse can easily be transformed into a squirrel by adding the bushy tail and an acorn.

Human and Pictorial.—Within certain limits the human form may be taken. The figures selected (mostly young children) should be dressed very simply, so that they can be represented as mere patches of colour. A snowman makes a good caricature to start with, or a sweep—as a study in black. Some action drawings are shown on Plate Xd. Lines and spots are employed to express action, and it is an old device which the youngest children can follow. It is practised in some schools to illustrate (conventionally, of course) stories, and it

is pretty extensively adopted in French schools for even advanced scholars. Care must be taken to show that the arms and legs have two parts of the equivalent of two parts. This idea has been further worked out in those comic "Children's Books", now so much in vogue, which show Dutch dolls and Golliwogs at play.

PLATE XI

SUITABLE FOR CHILDREN OF FIVE AND
UPWARDS. ORNAMENTAL STUDIES—
BORDERS—EXERCISES IN REPETITION

• *Note*.—This plate and the next one give a series of ornamental exercises of graduated difficulty, which may, with advantage, be taken alternately with the practice of nature studies. They are intended to give the scholars an idea of elementary patterning based on repeated units.

Borders derived from Mouldings.—Plate XI. These will be readily recognized as derived from Greek, Roman, and Renaissance mouldings. They lend themselves well to mass work, and the bead and reel mouldings are suitable for quite young children. They are reliable examples.

In practice, the width of the moulding should be at least 4 inches, and the length equal to twice the depth of this half-plate. Two may be drawn on a sheet, but not more.

Two border lines are required, and a centre line on which to string the beads. The border should be started from the left-hand end, and the main beads put in first. Try to get the children to judge the distances without measurement, testing them afterwards by measurement.

Thick lines and bands may be added outside the border lines, to give finish to the appearance. Two are shown thus completed at the bottom of the plate.

PLATES XIIA AND XII B

SUITABLE FOR SCHOLARS OF SEVEN OR EIGHT
YEARS AND UPWARDS

(Ornamental studies continued)

These plates find a place here, in order that the continuity of border patterns may be traced into the senior grades. Floral elements are introduced and the lines become more flowing or meandering. In Plate XII B will be seen more advanced borders consisting of animal elements.

At this stage the children should be able to rule their own lines, adding the extra outside border lines; always taking care that these vary in width and have likewise differing spaces between them. *Rulers should be employed as much as possible for all pattern work, and certainly for all straight lines, in patterning.*

The repeats should be carefully measured and set out with some pains. Some idea should be imparted to the scholars, of what repetition and alternation mean, and how to use two, three, or more harmonious colours (see Plates XIV and XV).

Each border should be not less than 4 inches wide.

PLATES XIII A TO XIII D

FOR CHILDREN FROM SIX YEARS OLD TO
NINE YEARS OLD

Aim.—To teach the use of the ruler and set-squares; to aid the eye to judge of size; and to cultivate neatness and exactness.

Ruler practice will, of course, be taken on *white* paper of about the size of one of these plates (unruled), the paper lying flat upon the desk.

Half an hour's lesson will probably be quite sufficient.

The first exercises will give the teacher a certain amount of trouble, and a great deal of patient repetition will be required; but directly these first steps are mastered the work becomes much easier. The holding of the ruler; the placing of the ruler; the marking off of the required number of inches from any part of the ruler; and the ruling of the first line, are the main initial difficulties. For the youngest children the rulers should be small—6 inches long, and marked only with inches and half-inches. Even for children in Standard I, the foot ruler should be marked only with inches and half-inches. The use of set-squares should be commenced in Standard I. The majority of teachers prefer them for all rectangular work from the very beginning.

Scholars should be taught to apply their ruler work *practically*, and this adds interest to the subject. For example: directly the child understands how to rule a line, it should be taught to measure its pencil, its slate, its book, or its finger, and then put down a line to mark off that length. It should also be practised in judging the length and size of objects, e.g., the map-pole, the pointer, the teacher's desk, and

so on. After a while the child will become quite expert at this. The nail shown, Plate XIII A, is first judged as to size, and then tested by measurement and drawn.

• Scholars of five and six learn to rule lines up to 6 inches, and to place them in any position; also to rule parallel lines by using both sides of their rulers, starting from the edges of the paper inwards.

Scholars of six draw right angles (using the 45° set-square) and develop these into squares and oblongs.

Scholars of seven get on to triangles and block letters, subdivide squares and oblongs, and introduce into them original ruled patterns, also construct straight-lined borders.

Scholars of eight practise more complicated forms, and how to represent, say, the ruler, or a course of bricks, an inkstand, or table-lamp, &c. Use also the 60° set-square.

Scholars of nine learn to measure simple accessible objects, as, e.g., a bat, a window, a syringe, a drain-pipe, a hat, a cupboard, a tin cup, &c., and rule figure patterns and borders.

After this, ruler practice develops into scale work and mechanical drawing, and into geometry. Even geometrical figures should be

practically applied to forms used in carpentry, building, engineering, &c., whenever it is possible. Geometry should also develop into pattern work in the upper standards.

Ruler work as shown on these plates should all be worked on *plain, not on ruled, paper*; and all the figuring should be neatly stated on the drawing, e.g., $\langle - - - - 4'' - - - \rangle$, and the scale given. Let o' stand for feet and o'' for inches. Dots to be short strokes, not points.

Construction lines should be ruled faintly, *not dotted* as in these plates (drawn thus for better reproduction); although scholars doing more advanced mechanical drawing or geometry may, under certain circumstances, be allowed to dot by using small and regular strokes. A piece of sand-paper furnished to each scholar will serve to keep the pencil or compass-lead at a fine chisel-point.

Ruler work is as essential for girls of all grades as for boys.

PLATES XIVA TO XIVD

SPECIAL COLOUR-WORK SERIES

SUITABLE FOR CHILDREN OF SIX YEARS OLD
AND UPWARDS

"We ought to love colour, and to think nothing quite beautiful or perfect without it." —*Ruskin.*

This branch of school work is dealt with in the plates now under consideration, and in the succeeding ones, in order to present the subject as a whole.

Method of putting on Flat Washes and Gradations.—Plate XIVA. Fill rectangular or other shapes in the manner shown with some good monochrome, such as sepia, madder brown, burnt umber, raw or burnt sienna, French blue, or Indian ink. Care must be taken to keep well within and to the outline. For all large washes it is necessary first to damp the paper slightly in the central part of the surface to be covered, nearly to the outline but not quite to it. This will enable the colour to spread easily, and will also give a chance of getting good edges. The paper should be tilted at an angle of about 45 degrees, and this applies to all *small* colour studies in wash, though larger and more advanced work can be done nearly vertically.

Brush work may be done vertically or horizontally according to circumstances.

Method of laying on a Flat Wash of Transparent Colour.—Slightly damp surface, then with a full brush of colour from a well-filled palette draw the brush along the upper edge. As long as the colour collects in a little liquid ridge all is safe. Continue dragging the brush across in bands, each band overlapping the previous one along the ridge of liquid colour. *Do not return to touch up*, or blotches will result. Let the colour work itself, and leave it to dry as it will. The lowest pool of colour should be taken up with a dry brush. Be extremely careful to work to the outlines while descending: there need be no hurry, as the damped central portion will keep the colour moist until the next application, and whilst attention is being paid to the edges. When *quite dry*, repeat the process if the tone is not dark enough. Superimposed tones when repeated will give any requisite depth of shade, either to the whole surface or to any detached portion of it. Brush-point ornament of darker or lighter tone, painted on the ground, makes a harmonious scheme.

Gradating.—This is the next exercise, and it should be tried in several directions, vertically (most easy) and horizontally. First *graduate* it

from dark to light by adding more and more water; then from light to dark by adding more and more colour. Try then a cylinder or a sphere, putting on, in the first instance, a pale tone all over, with the exception of the high light, which should be left perfectly white. When this flat wash is dry, commence with the shadow and gradate to the high light. Take out the reflection, or retouch darkest part of shadow. Stipple slightly any small patches, or take out any blotches with the point of the clean brush, when the whole is dry. Practise painting in this way a stone column, a group of eggs, or a set of golf or tennis balls.

Brush-work Practice, Plate XIV B, speaks for itself. Here the brush point is used rather than the body of the brush, as in the last exercises. In one or two of the examples both processes are combined. Naturalistic silhouettes of the kind here depicted make most interesting subjects, such as roof skylines, pointed spires, factory chimneys, ships' masts (in dock), promenade piers, rows of lighted lamps, tree tops and branches.

Colour Harmony.—Plate XIV c. Valuable study for senior scholars. Let the diagrams be constructed to a large scale in the manner shown. The central star gives at a glance the

laws upon which the theory of the harmony of colour depends. The three outer points are the *Primaries* (use Lemon Yellow, Aureolin, or Gamboge; Cobalt or French Blue; Scarlet Lake or Vermilion plus Rose Madder). The *Primaries* mixed in pairs (about equal quantities of each) will produce the *Secondaries* in the lozenge-shaped intermediate spaces. The *Secondaries* mixed in pairs will produce the *Tertiaries* in the remaining three triangles.

From the three *Primaries* all possible colours can therefore be produced; and by the admixture of black or white, the *Tertiaries* can be extended to an indefinite range of grays and drabs.

(1) *Exercise for Constructing the Chromatic Scale*. With a pair of compasses strike off a circle (radius say of 4"), and with the radius mark off six equidistant points on the circumference. Again subdivide into twelve equal parts, and from the centre draw to each point the twelve radiating division lines. Starting from the left and working round to the right, fill in compartments 1, 5, and 9 with red, blue, and yellow respectively. In spaces 3, 7, 11 fill in the Secondaries, violet, green, and orange. The intervening remaining spaces will then be filled in with Secondaries *tinged more strongly* with the Primaries to which they are in closest proximity. Thus a complete scale is formed of very beautiful tints.

(2) *Scale of Harmonies*. Construct a circle of 2" radius, outside another of 4", and outside again another of 6".

Divide the centre circle into three equal parts from the centre; the second into the same number of parts, the division lines alternating with those of the first circle; the third into three equal parts, the division lines similarly alternating with the second circle. The innermost circle will contain the Primaries, the second the Secondaries in like order, the outer the Tertiaries in like order.

All upper scholars should learn how to construct these.

Black and white are not colours, though they are pigments. White adds body to a colour and brightens its hue, black dulls a colour. In the case of prismatic colour, white means the presence of all the primaries blended, and black the absence of colour; in the case of pigments, white means an absence of colour, and black the presence of all the colours. This is proved by the modern three-colour process in printing, by which all effects are produced by the three primary colours superimposed, and black by the solid printing of the three primaries one on top of the other, generally in this order: Yellow, Red, and Blue.

It would not, however, be very practicable to paint pictures with the three primaries only; the process would be too tedious and inconvenient; so several intermediate pigments, caused by the admixture of varying proportions of the primaries, help to stock our palettes, and save time.

The *Primaries* are:—Blue, Red, Yellow.

The *Secondaries* are:—Purple (Violet), Orange, Green (Primaries mixed in pairs).

The *Tertiaries* are:—Russet, Citrine, Olive (Secondaries mixed in pairs).

The following table will help to a clearer understanding of this process:—

<i>Primaries.</i>	<i>Secondaries.</i>
Blue	{ Blue, } Purple.
	{ Red, }
Red	{ Red, } Orange.
	{ Yellow, }
Yellow ...	{ Yellow, } Green.
	{ Blue, }
<i>Tertiaries.</i>	
Blue,	{ Olive.
Red,	
Yellow,	
Red,	{ Russet.
Yellow,	
Blue,	
Yellow,	{ Citrine.
Blue,	
Red,	

Therefore in Olive—Blue predominates.

Therefore in Russet—Red predominates.

Therefore in Citrine—Yellow predominates.

Yellow, }
Red, } Superimposed give Black.
Blue, }

White and Black mixed make Gray; or pale Black is Gray. The three Primaries mixed to their strongest values give Black.

Gray mixed with the *Secondaries* gives:

With Orange = Buff,	} These are more subdued Tertiaries.
With Purple = Plum,	
With Green = Sage,	

Qualities of Colours.—Blue is cold and receding, Red is stationary and exciting, and Yellow is light and advancing.

COLOUR TERMS

A *Tone* is a colour mixed with either White or Black.

A *Tint* is a colour mixed with White.

A *Shade* is a colour mixed with Black.

A *Hue* is a colour mixed with Gray, i.e. White and Black.

These terms more especially refer to opaque colours (oil or tempera), but in transparent colour-washes the diluting of the pigment with water allows the white ground to show through sufficiently to modify the tone in intensity.

Harmony of Colour is obtained by the presence of the three primary colours, either in juxtaposition or in combination; or by different tones and gradations of some one colour (monochrome). The three primaries are in *violent* contrast, therefore better harmony is obtained when secondaries are used, either together or in conjunction with the primaries; and it is *agreeable* contrast which means harmony. The tertiaries are used if a quiet and sombre effect be required. Colours which perfectly har-

monize improve one another to the utmost, and the rarest harmonies lie close on the verge of discord, says Christopher Dresser.

Primary colours should be but sparingly used on account of their strong contrasts, but secondaries not offering such strong contrasts are more pleasing to the eye when worked together in a design. Scholars should be trained to know the important value of secondaries and tertiaries, and even to prefer them.

A complementary colour is always in harmony with the colour which does not enter into its composition, e.g. if yellow (primary) be the prevailing colour, there should be present some small quantity of purple (secondary), its complement; or if a green (secondary) predominate, there should be a touch of red (primary) to balance. "Complement" means the completion of a harmony; analogous to the completion of a full chord in music.

No better study for a clearer appreciation of colour can be undertaken than an examination of the Solar Spectrum, or, in other words, the colours of the rainbow. Several interesting facts reveal themselves.

A rough rendering of a section of the prismatic scale can easily be made by dividing up a long rectangle in the manner shown. These

divisions give only *approximately*, but still not too roughly, the proportions of tints: in the case of the rainbow, the red would come on the outside of the arc.

It will at once be seen that there are present the three primaries and the three secondaries, making six colours altogether. There is said to be a seventh, and it is called indigo; though strictly speaking this seventh is but a deeper transitional tone of the blue, in reality a darker blue. Hence the actual colours amount to six as stated, that is, as far as the artist is concerned.

The first lesson to be gleaned from an inspection of the component colours is, that the proportionate width of each band exactly coincides with the proportionate limit of each corresponding colour which it is safe to use in any harmonious scheme.

A second lesson is, that it shows which colours may most safely predominate, and which should be more sparingly used.

A third lesson is, that it demonstrates the value of the blending, the merging, or the running of one colour into another. All three lessons are of paramount importance.

The diagram, Plate XIVc, shows no blending whatever, though this would add still more to its effect.

We see that the yellow band is very narrow, showing that yellow should be used sparingly and specifically: a golden sunset is a special thing, yellow flowers are dotted about the fields, in relatively small quantities, and as isolated patches of splendour. Violet, orange, red are found in flowers, fruits, and in the colouring of rocks, earths, &c., and come next in the width of band; so in a relative manner they predominate in nature to a greater extent than yellows. Green follows with a wider band; it is a colour restful to the eye, and therefore predominates still more widely in nature, as, e.g., in all foliage, in the long stretches of grass, in the grateful forest masses which go to clothe the otherwise barren earth. Merging into blue, it is seen in the broad expanse of ocean. Lastly, blue holds widest sway in all natural effects, filling the sky, tinging the clouds, giving the blueness to the atmosphere and distance, and suggesting infinitude on all hands.

Blue, therefore, is a safe colour to use for predominant effects.

Green comes next, then reds, drabs, grays; lastly yellows.

Below the prism diagram will be seen another of twelve pigments, arranged in such a manner that the colours may most nearly approach not

only to a rendering of the primary colours, but of their blendings as seen in the rainbow. They are classified into three main divisions under the heads of the three primaries; and ought to be arranged in this order in the paint-box or on the palette, though they rarely are. They are amply sufficient for all purposes, with the addition of white and black for occasional use. Orange might be omitted, as it is so easily mixed, and instead madder-brown introduced next to Vandyke brown. Browns are obtained by mixing black with russet, but since sepia and Vandyke brown and madder-brown are such pure natural browns they are of great value; no amount of mixing being able to rival their purity and transparency. Aureolin may be substituted by gamboge, and Indian red by light red. Alizarin crimson or rose madder are the only safe crimsons. Lakes and scarlets are fugitive. Prussian blue is fugitive, so is indigo. The Vandyke brown belongs to the class of yellows, and might have come after burnt sienna—since black and burnt sienna form Vandyke brown.

Application to Leaves, Flowers, Fruits, Vegetables.—Plate XIVD. Any of these afford useful exercises on the application of the principles of harmonious colouring; but the very best

first practices are in greens, such as are seen in such profuse variety in leaves. Note how the fronts and backs differ, copy all their variations, and strive to imitate their freshness in spring and their mellowness in autumn. Try to run in the different tints together while the colour is wet. Midrib and markings, stalks, &c., are added last. Follow these exercises up with practice in other colours, as in the viola, the cherries, the tomato. Note the value of the high lights in these latter. High lights are left with a sharp edge to give them brilliancy. Endeavour to get the full strength of the required tint the first time. If not successful, repeat the process. This constitutes true “massing” in water-colour work. Apply the same method to flowers, insects, &c. In oils the contiguous colours are blended by dragging their edges one into the other, and softening with a badger hair softener.

PLATES XVA AND XVB

SUITABLE FOR ADVANCED SCHOLARS

(Colour work continued)

Blending of Colours.—Plate XVA. Exercises such as those here shown make excellent prac-

tice towards a proper manipulation of water-colours. The colours are run on to a damp surface, and only pure colours are used. Three brushes may be employed, and at first only the primaries (i.e. any of the pigments making up the sets as shown on Plate XIVc) should be made use of. The colours blend and amalgamate to form secondary tints where the pure primaries meet, and in consequence a very beautiful gem-like effect can be produced. Exercises in which one or other colour is allowed to predominate are given in X and Y. Crystal-like and mottled effects, such as found in precious stones, marbles, ordinary pebbles (when wet), and birds' eggs, butterfly wings, flowers, fruits, &c., are readily obtainable. Either one, two, or three primaries with their numerous hues may go to make a blend. By such practices the children soon get an idea of the marvellous scope and variety in beautiful tints which may be secured by this use of colours. The particular examples here shown were taken from windows in Chartres Cathedral, France; some of the oldest and finest mediæval glass in existence. La Sainte Chapelle is the "gem" of Paris on account of its wonderful window-surface area, making it appear from inside like a palace of crystal.

Enamelling also owes its indescribable beauty to similar iridescent blendings.

Colour Work.—Plate XVb. After the above practices the scholar will understand better how to go about painting a flower such as the tulip here shown, which is a harmony of yellow and red, the red being blended into the yellow. So with the Japanese lantern and the glass vase. Children must get into the way of looking at the object they are painting, more as a patch of colour blend to be matched, than as an actual object. Even the three pictorial pieces are in reality only patches of harmonized colouring, on the lines of Japanese wood-block colour printing, and are literally "impressions".

The shaded and tinted vase shows another use of colouring. It is a more mechanical and conventional process, mere local tinting in fact, but it is none the less useful, especially for beginners. When it is important that the scholar should express rather the solidity of an object, by strongly and carefully shading its form in black chalk than by too nearly imitating its colour effect, an elaborately and carefully drawn and shaded representation of it should be made in chalk or charcoal. Local tints may then be run over this and so help materially to add to its effect; while at the

same time the scholar will not be troubled in thinking of two things at once; but he will make sure of the light and shade and modelling first, which are the prime essentials, and then attend to the local tints.

PLATES XVI A AND XVI B

SUITABLE FOR CHILDREN OF DIFFERENT AGES

(Colour work concluded)

These subjects are here presented in order that the usefulness of body colour (that is, colour mixed into a body of Chinese white, or Chinese white alone) may be seen; also the equal usefulness of brush work. Brush work can be done with body colour (i.e. opaque colour) on a tinted ground, such as brown or gray paper, or on white and tinted paper, by using transparent water colours. All the examples shown on these plates could have been equally well worked on white paper; but body colour on a dark ground looks decidedly more effective, and is certainly more decorative. The tints also correspond more closely to the tints formed by coloured chalks. Tinted grounds can be made either by transparent colour or by body-colour washes.

Brush work is by no means difficult, in fact it has been somewhat freely introduced into the schools solely on account of the comparative facility by which it can be learnt. In districts like the Potteries, it is a very necessary form of drawing, and the reason is evident. Still, to the majority of school children, not only in this country but in all western nations—in contradistinction to the Japanese, who have practically no architecture, sculpture, or flowing script, and to whom, therefore, the brush is a ready tool for *all* purposes—the pencil is the most handy and widely employed instrument. For us, therefore, the pencil holds first place.

The brush is made use of, both to draw with (when the tip is mainly employed), and to spread mass with (when the entire body of the point is brought into play). These methods of technique are seen in the following examples:—

Bold Outlines.—Plate XVI A. A most valuable practice with the brush; requiring gentle and variable pressure of the point, so excellently illustrated in all Japanese work. The main form may first be sketched in—in chalk if the work is on brown paper. Black ink can be used at times in *lieu* of Chinese white.

Treatments.—Plate XVI B. Other treatments

showing the effectiveness of high lights added to pure outlines in the case of transparent objects, or to the mass in case of glazed ware; illustrating also the solidity of mass work in colour; and indicating a useful employment of Indian ink or ordinary ink for certain subjects.

Note.—As a rule it will be found best to show all common objects in pure elevation only; though this does not hold good in the case of flowers, leaves, &c.

A befitting continuation of brush work is stencilling, but here the aid of the specialist would be required, and this course professes only to deal with the work that can be taught by the class-teacher.

Some General Hints on Outline Drawing to Teachers of this Section.—Drawing is intended to tutor the eye to visualization. The main idea should be to make interesting by using as often as possible actual models for all exercises; selecting those which have such forms and contours as shall give consecutive practice in all the varieties of lines (straight and curved) that are to be found in nature; thus carrying the children (unconsciously to themselves) by easy stages through all the difficulties of linear drawing. The method indicated for Standards I–III in this part is not arbitrary, and may be departed from at pleasure for more nature studies. At the same time, it is eminently systematic and practicable.

The employment of actual models (mainly flat objects

in the lowest classes) is essential whenever they can be had; and things like notice boards, pictures, &c., are always accessible. Having described its parts, the teacher should proceed to make a small sketch of it (his own particular rendering) in the corner of the blackboard. Then proceed to analyse the form, referring to the model. Lastly, work out the large drawing step by step with the scholars. Nature studies can be dealt with in the same way.

If charts are used, the preliminary small sketch can be dispensed with, nor need the teacher carry his explanatory drawing to completion.

In Model Drawing (the most difficult of all subjects to teach) it is necessary to give individual attention and personal criticism to each scholar.

Memory drawing may take up about fifteen minutes of some given lesson. It should develop spontaneity of expression. Scholars often crave to do a drawing *all by themselves*. Allow them occasionally to do so.

Use nature forms as frequently as possible.

Allow no dotted lines in any free drawing.

Aim at getting free, bold, and spirited drawings, remembering that perfection only comes with practice. The path leading to "preciousness" is often marked by failure. The young Japanese artist will waste quires of paper in practice before he attains his unrivalled perfection of workmanship and freedom of style.

PLATES XVII A AND XVII B

SUITABLE FOR SCHOLARS OF SIX AND SEVEN
CORRESPONDING TO STANDARD I

No. in class, 30-60. One Teacher. Time per week, $1\frac{1}{2}$ - $2\frac{1}{2}$
hours, including Ruler Work and Memory Exercises.

Note.—These plates show a return to the Free-Arm Drawing of Plate VI (viz. Stages XII and XIII). It presupposes some preliminary exercises with the circle, as a free figure, and is then confined to the drawing of segments of the circle (arcs, quadrants, &c.), within the given limits of three points—a much more difficult procedure.

Aim.—To cultivate a free use of simple curved lines, in order to gain a complete mastery of the *arc* curve (of varying depths) *in combination with straight lines*; to obtain a knowledge of the construction of simple patterns; and to produce bold outlines in chalk of good quality.

Note.—In consequence of the various sets of charts generally known in schools (admirable in all other respects, though defective in systematic gradation for the lower classes) not fully dealing with the requirements of Standards I, II, and III, it is hoped that the suggestions contained in these plates will be particularly helpful to teachers.

The production of bold outlines of a certain degree of perfection is a distinct step forward. When sufficient perfection is attained in this, the outlines may be “filled in” or “hatched in” with parallel lines drawn in some one particular direction, either with chalk of the same tint, or one that harmonizes with the outline or suggests local colour.

The teacher will, of course, take care to set the most simple copies procurable, and will select in preference the forms of well-known common objects, relegating all geometrical straight-lined figures to the ruler practice, which should be concurrent with the free-arm: see Plates XIII A to XIII D. Memory drawing should be attempted at intervals as a regular practice, from this stage onwards.

Familiar Forms.—Plate XVII A. It will be seen that nearly all of these are composed of straight lines and curves. Also the objects are all in elevation. Under the old system no curves were attempted in this class, and yet to a beginner curves are more easy to draw than straight lines. Hats, helmets, drums, tents, umbrellas, fans, hay-ricks, &c., are additional suggestions.

Patterns of a very elementary description should be taken at intervals, based on these

stage, and adapt it to bird forms and fruits; but unless the scholars are very forward it is advisable to leave the ovoid form until Standard III.

All the examples suggested here may be worked in Freehand. The ellipse, however, cannot be put in right off; its axes must be first drawn, and its ends, thus: (—|—), then finished by carrying the line right through.

Colour work and brush work as in Standard I.

Memory Exercises and Patterning.—Draw, e.g., a horse-shoe, life-belt, the Forth Bridge (simplified), silk-worm and cocoon, a candelabrum, lantern, lamp and lampshade, a Roman lamp, Saturn and its belt, Jupiter and its moons, the arrangement of planets in the Solar System, a clock face (perspective view), a butcher's block, a circular mirror, a bread platter, a mariner's compass, oranges and lemons with their quarters and sections, a fishing-rod, float and tackle, a rifle, a camera and tripod, chains of various-shaped links, drum and drum-sticks, a street lamp, a public notice board, a gong, a garden roller, a fish (say trout or cod, flying-fish, &c.), and borders of eggs, pears, plums, cherries, honesty, &c.; and all-over patterns on squared paper.

PLATES XIX^A TO XIX^D

SUITABLE FOR SCHOLARS FROM EIGHT TO NINE
CORRESPONDING TO STANDARD III

No. in class, 30-60. One Teacher. Time per week, $1\frac{1}{2}$ -2½
hours, including Ruler Work and Memory Exercises.

Aim.—To secure a mastery of the compound or double curve, otherwise the wave, vermicular, or serpent curve; also to gain a knowledge of the laws of growth (including exhaustion), repetition, and radiation.

Note.—With a mastery of the compound curve as seen in the wave, the leaf, or the egg and heart, it will be found that practically all curves found in nature have been dealt with, e.g., the circle, the arc, the ellipse, the oval. This, then, is good groundwork and preparation for the work of the senior classes.

The egg or oval form (in distinction to the ellipse) and the ovate or heart form, both composed of double curves of wonderful subtlety, dominating many of the most refined forms in nature and in art, are met with frequently in *vases*, which are dealt with in Section V of these plates. They should be practised frequently.

Simple unserrated leaves also furnish a vast variety of compound-curve studies, and should be employed as frequently as possible.

Description of the Plates

nesses of all kinds are another inexhaustible treasure-house of beautiful forms, and amongst them will be found many delightful studies of the spiral; as also in the vine, hop, and other tendrils.

I. *Compound Curves*.—Plate XIX A. (A) Draw a meander through five points on a line (either vertically or horizontally) in one continuous action. (B) Same, with tangent scrolls added. Practise frequently “Tangential Junctions”.

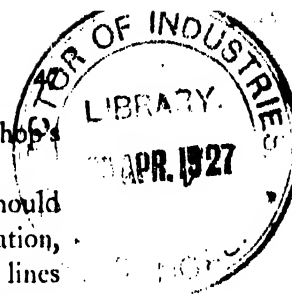
II. *Lines of Growth and Direction*.—Very varied stem lines used in ornament, expressing vitality, growth, and exhaustion. The spirals are of two varieties, viz. the Archimedian (having its convolutions equidistant) and the Ionic (showing diminishing space). Practise both, inwards and outwards. Call them watchsprings or Catherine wheels. (c) shows a round curve, (d) a flatter one, and therefore a more refined one. Flat curves are characteristic of the best modern work in contradistinction to ancient Roman and Renaissance work. Greek curves were flat, based on the ellipse; whereas Roman were round, based on the circle, and were in consequence to a certain degree vulgar. (E) (F) (G) and (H) are modern flat curves, used as lines of growth or direction. Select copies

which have such curves, e.g. a bishop's crozier.

III. *Radiation*.—Plate XIX B. Time should be spent practising different kinds of radiation, such a universal law in nature. All lines should be made to fine off at their points to emphasize their exhaustion. Varieties: (K) alternate radiation; (L) balanced radiation; (M) forked radiation; (N) from a line; (O) from a point; (P) from central stem; (Q) free growth, upward direction; (R) free growth, downward direction; (S) from a centre; (T) curved radiation. Quote natural instances, e.g. tree-growth and feathers, ferns, grasses, human fingers, comets, aurora, sun's rays, &c., and fireworks of all kinds. Call the action “shooting a line”. Diminishing thicknesses to express exhaustion, as in veining, should be well mastered.

IV. A suitable test example set from Whadlington and Jackman's Free-arm Charts (Standard III), illustrative of the value of radiation (in the veins), and the grace of a natural compound curve in the outline. Shows also how to diminish veins in thickness towards the border, and that they should never quite reach to the outline. Leaf or flower copies of this description are excellent.

V. *Vase and Bottle Forms*.—Plate XIX C. An



endless variety can be devised by drawing compound curves and carefully reversing them over the central line. Vase composition is excellent practice for scholars, and they should be made familiar with the different details of the vase, as shown; noting that some have one part and some another missing, and that few are really fully complete, though they may be perfect in form. Greek vases and Venetian glass are the best examples to follow. Demonstrate, if possible, from actual examples.

VI. *Ornamental*.—Borders showing the results of repetition and radiation (in the two top ones), and the use of compound curves (in the lower).

VII. *General Application*.—Plate XIX D. Various common forms built up of compound curves. Shell forms supply many beautiful shapes, and soft felt hats, panama hats, girls' or

ladies' hats, oilskin hats, umbrellas (open and closed), birds' feathers, and things of that description indicate other suitable forms. Always use actual objects for models whenever possible. Have as much expression put into their outlines as possible. Repeat them as freehand copies.

Memory Exercises in Patterning.—Draw, e.g., a vine or hop tendril, fireworks and rockets, a comet and tail, a bird's feather, a peacock's feather, a bird's wing, a bird's talons, a fire hose rolled up, a watch-spring, an ammonite shell, a periwinkle shell, a cockle shell, a fir cone, a flaming torch, a tea urn, a pair of scales with weights, a reindeer sleigh, a quill pen, heads of wheat, barley, and oats, a head of lavender, simple leaves (e.g. the indiarubber plant, the laurel, spray of rose leaves, a crocus and leaves), and, an open fan. Design borders or all-over patterns (on squared paper) of pomegranates, shells, snow crystals, bees, butterflies, vegetables, fishes and their scales, &c., showing repetition, alternation, and radiation.

PASTEL WORK FOR THE "STANDARDS"

Only since the advent of really good crayons for school purposes has it been worth while trying to make an advance on kindergarten chalk work by securing that greater degree of finish and those more subtle variations of tint that good crayons or pastels will give. The "Greyhound" pastels have been especially recommended for the purpose, and each scholar can be provided with a "twelve set" box at a reasonable rate. A good black or grey is absolutely essential amongst the set, and makes all the difference.

The finger or a rag may be used to rub in the larger tones, these being "finished-over" by direct "hatching". The hatching of one tint above another will give secondary or compound hues. These exercises of the junior classes are distinguished from the chalk drawings of infants shown in this volume, by the addition of the accompanying *cast shadows* in all cases where the objects are seen against backgrounds. These are generally done with the grey pastel. Otherwise the effects are got exactly as in the infant Plates.

STAGE I

Fix dot in any position

METHOD Always work from centre outwards
enlarging to required size

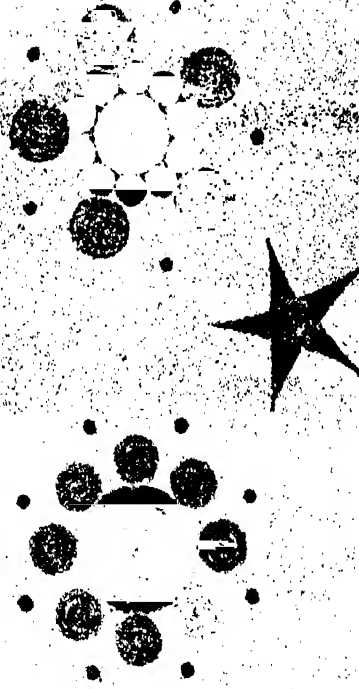


STAGE II



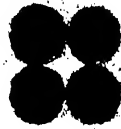
Enlarge dot to any given size

STAGE III



Combine to Construct patterns built up from centre

STAGE IV



4 Balls



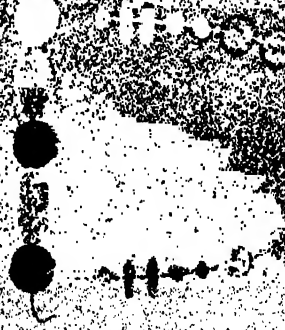
8 Apples



15 Oranges

To Build up a Square with 16 Oranges & a Triangle.

STAGE V



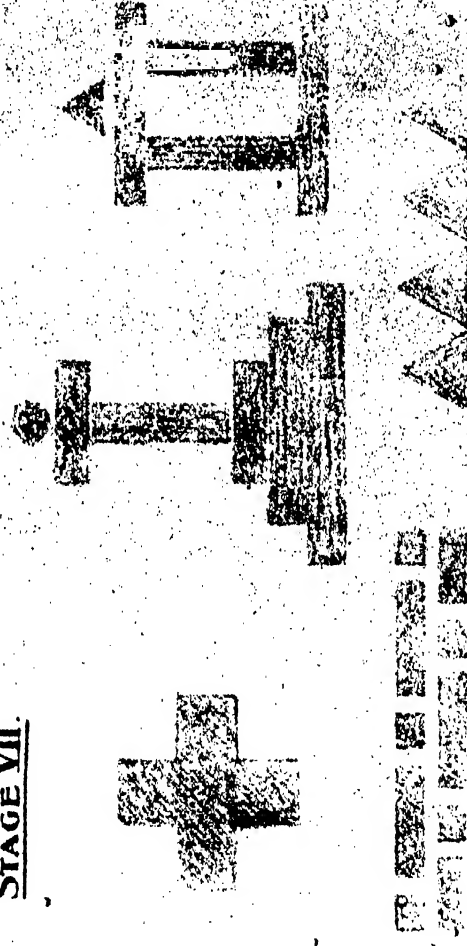
Simple Lines of Direction added
to form Strings of Beads & Stars

STAGE VI.



BRICKS

STAGE VII.



BRICKS APPLIED

STAGE VII

H J M

◊ A A A A A A

◊ U U U U U U

1 2 3 4 5 6 7

z Z Z Z Z Z

◊ 0 0 0 0 0 0 0 0

Block Letters

STAGE IX a.

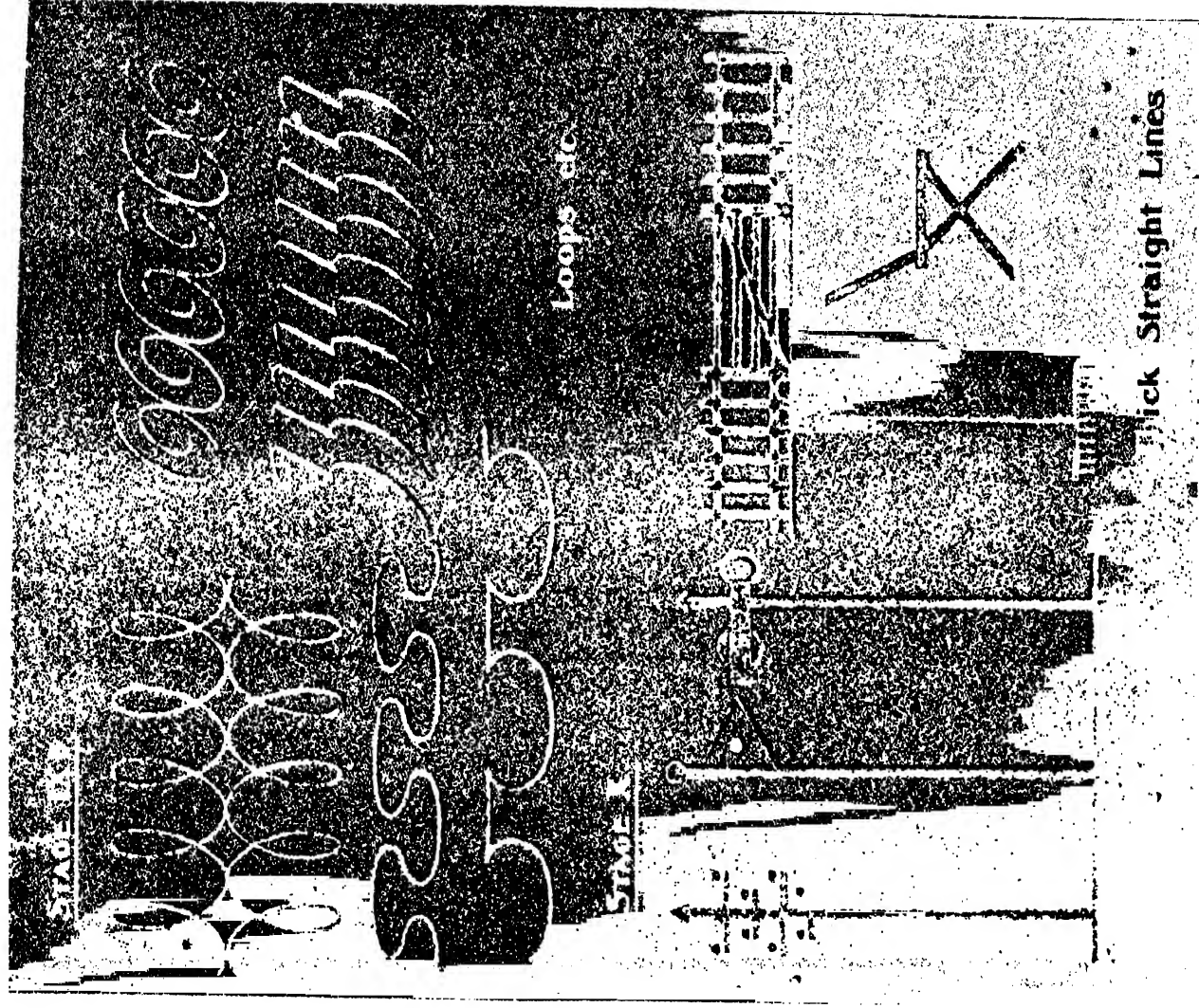
2 B L e v e

p p p p p p p p
c c c c c c c c

2 4 0 8

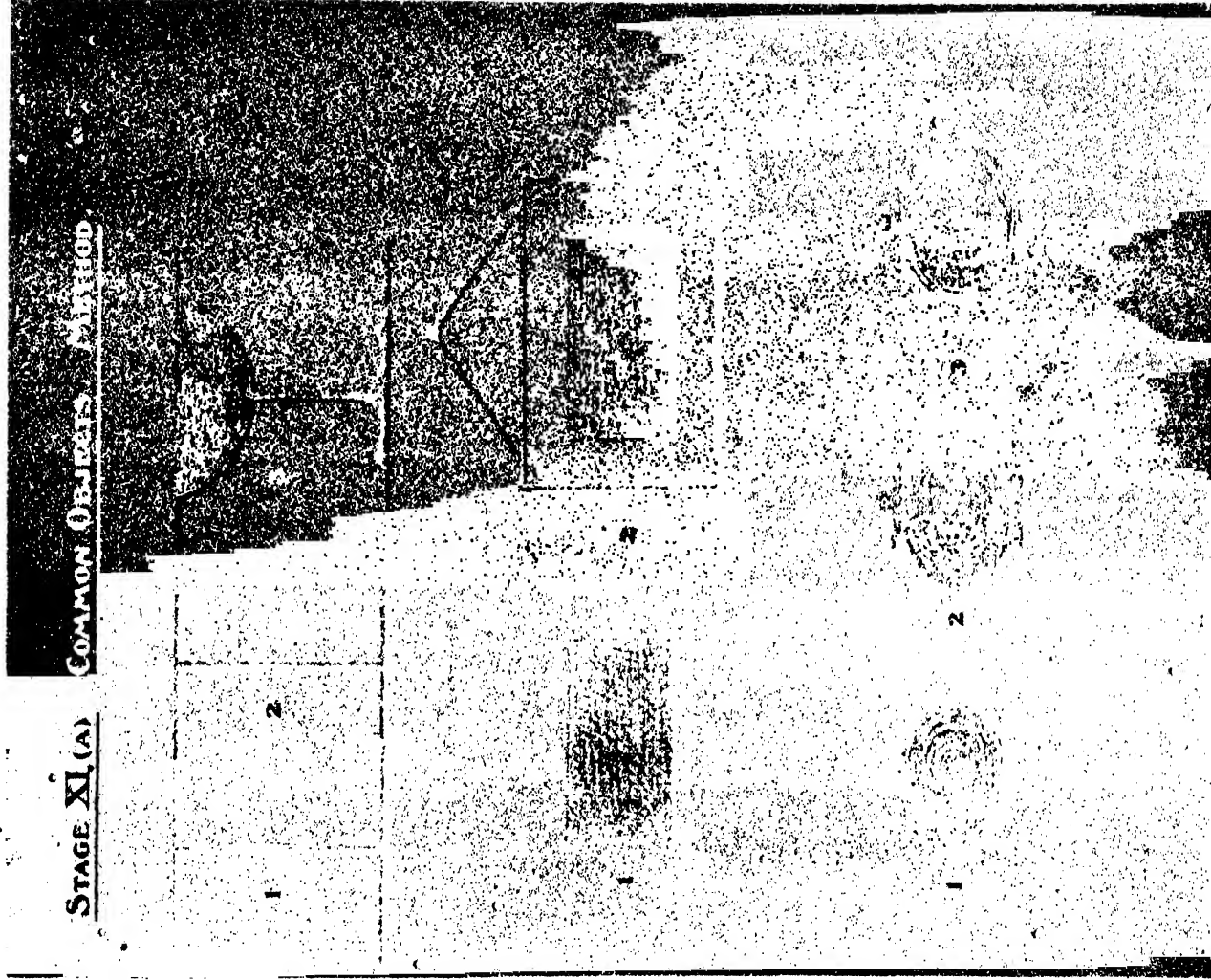
61 61 61 61 61
9 9 9 9 9 9 9 9

Written Characters

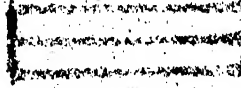
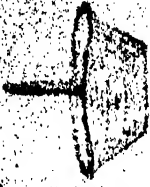
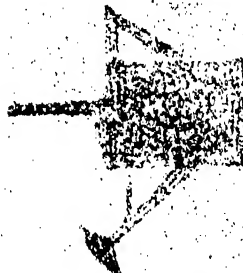


STAGE XI (A)

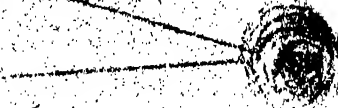
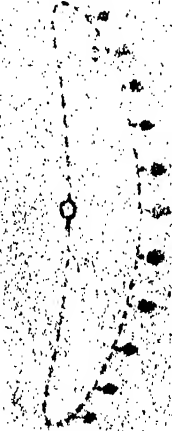
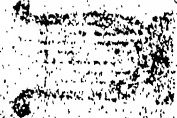
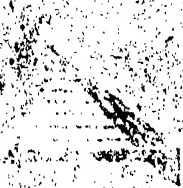
COMMON OBJECTS METHOD

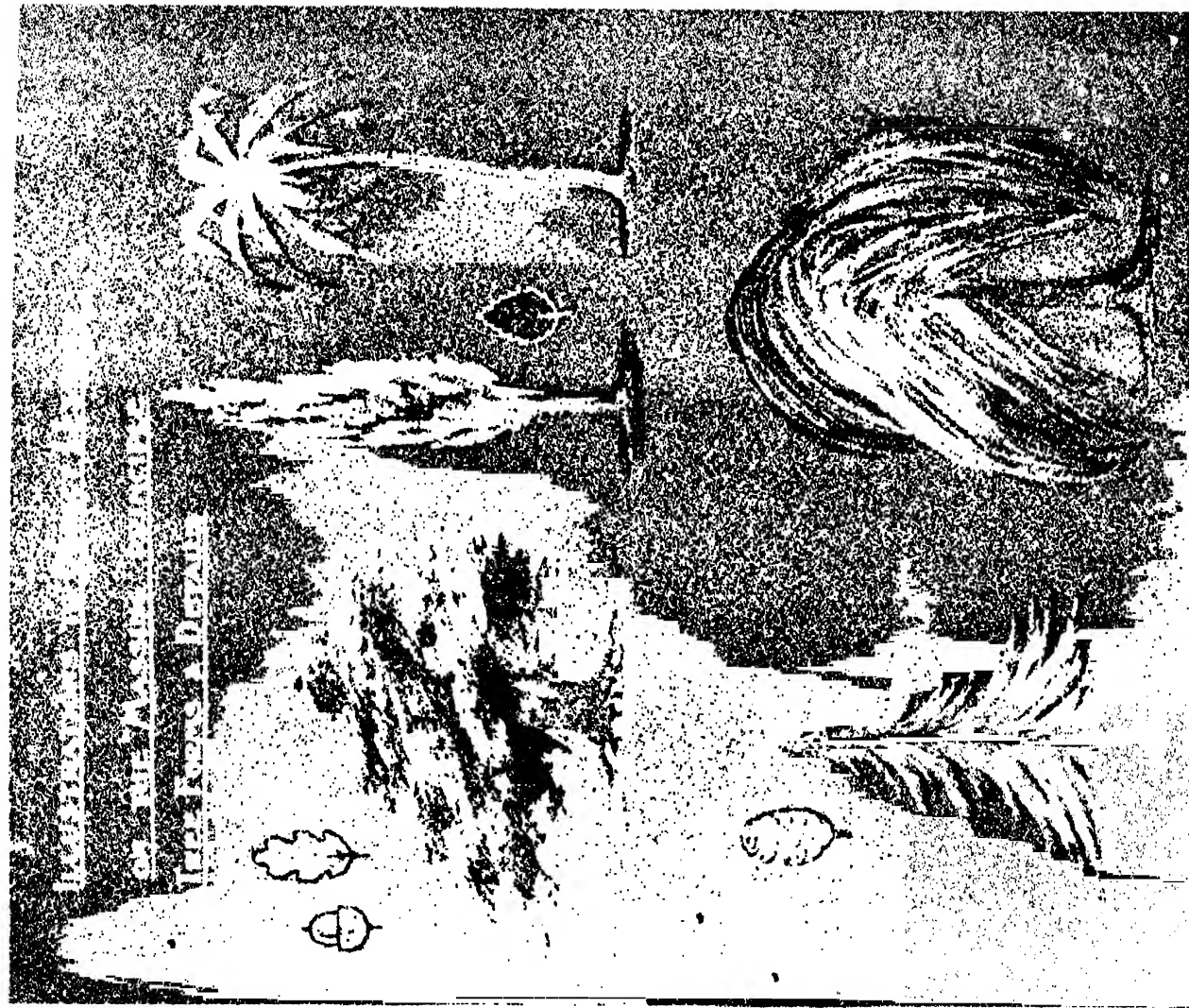


STAGE XI (A) COMMON OBJECTS. TREATMENT.



MISCELLANEOUS ARTICLES





FRUIT & VEGETABLES

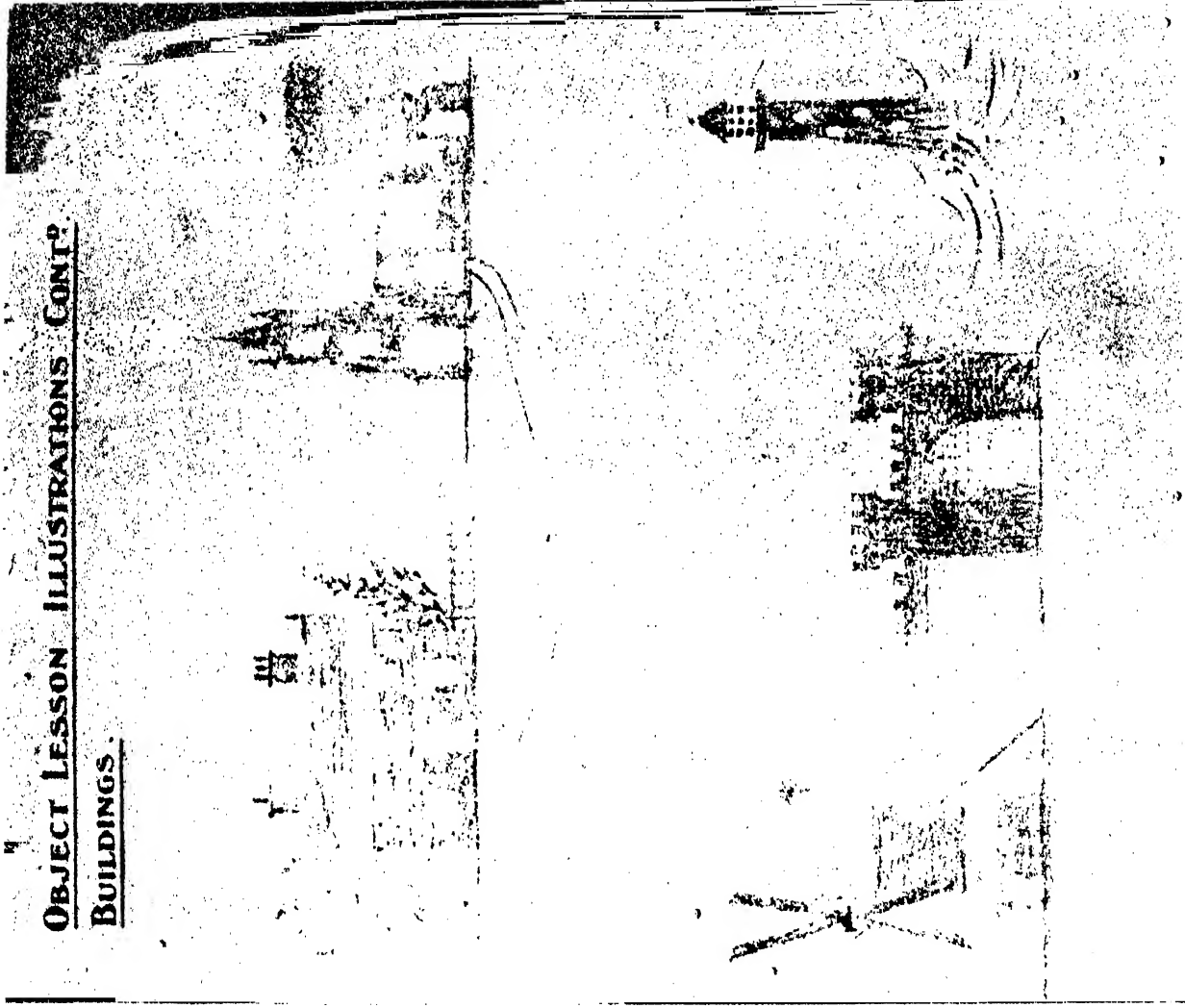


BOOTS & SHOES

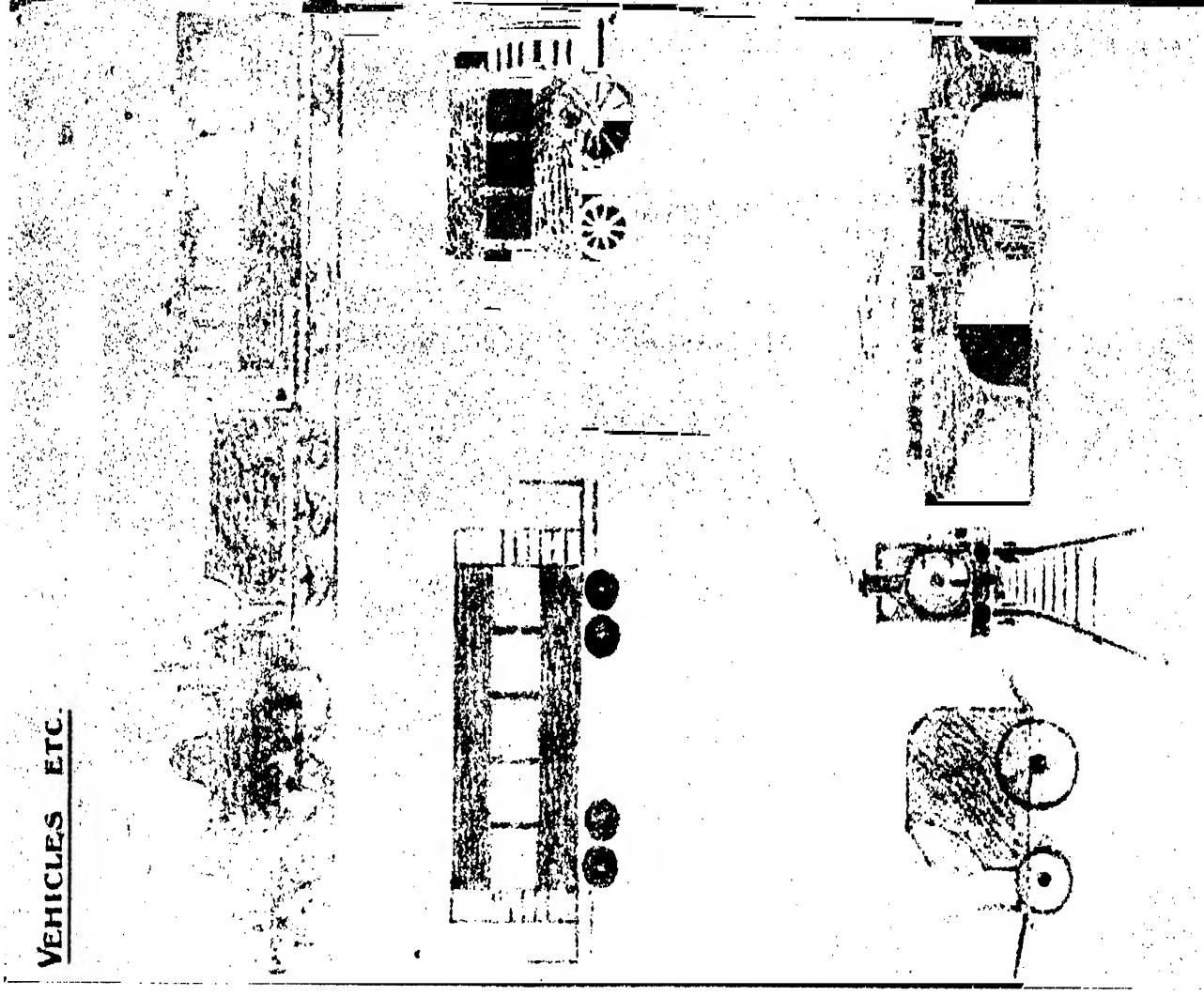


OBJECT LESSON ILLUSTRATIONS CONT.

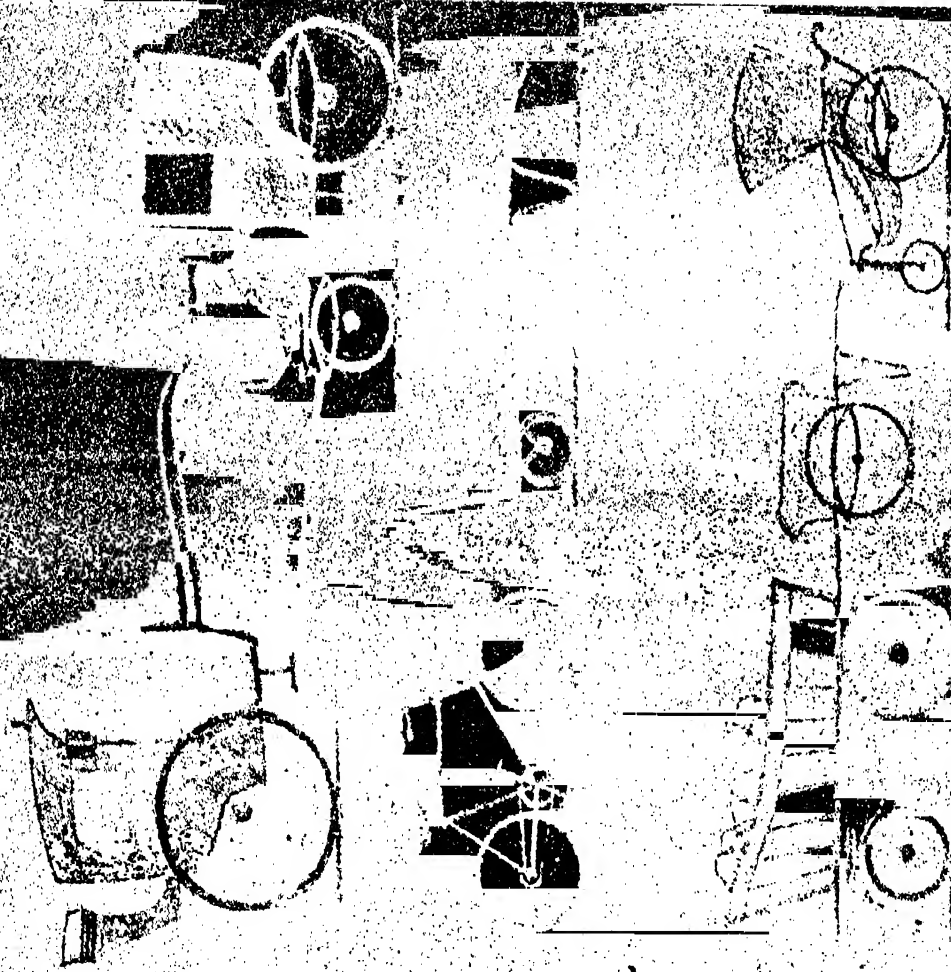
BUILDINGS.



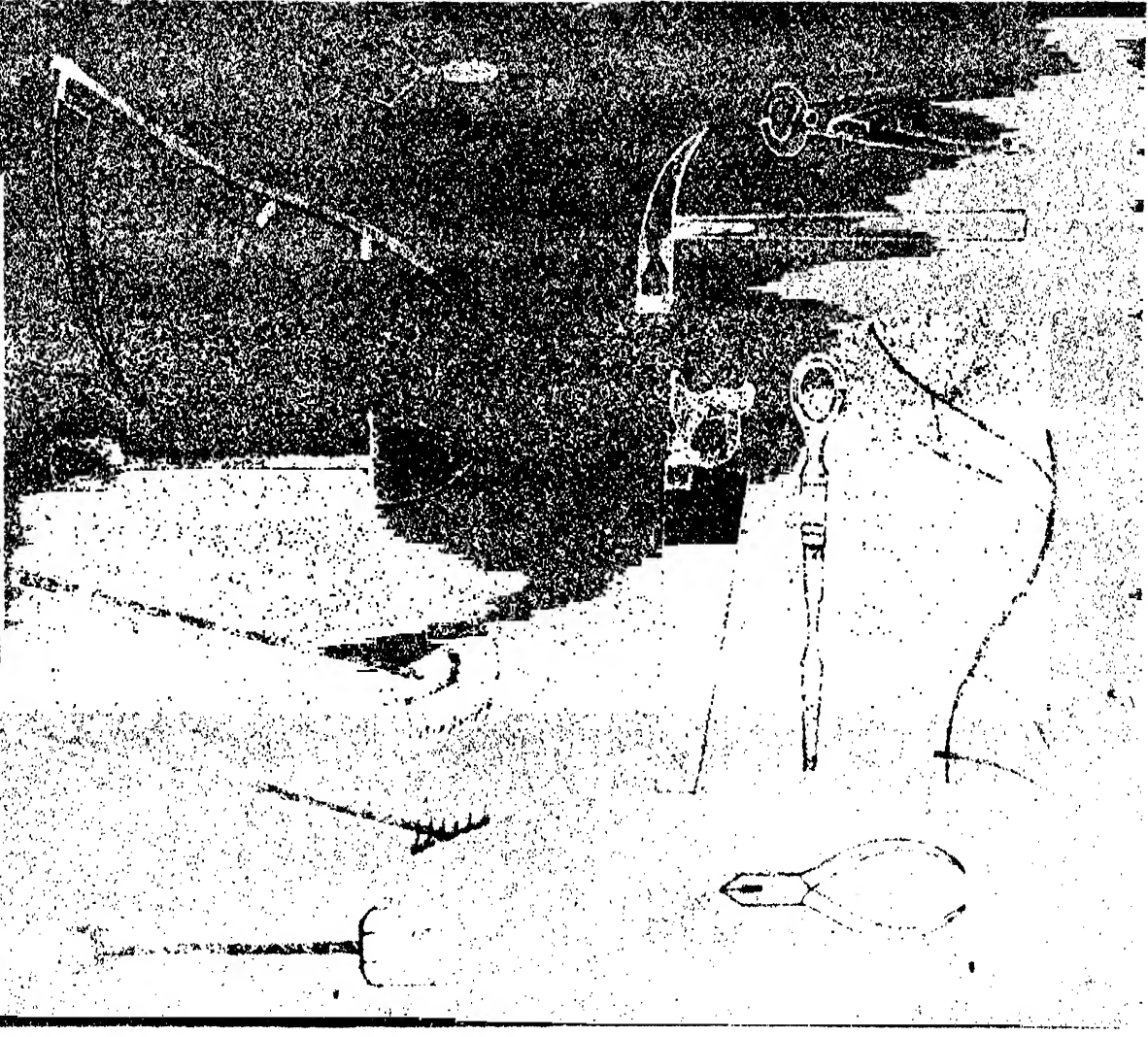
VEHICLES ETC.

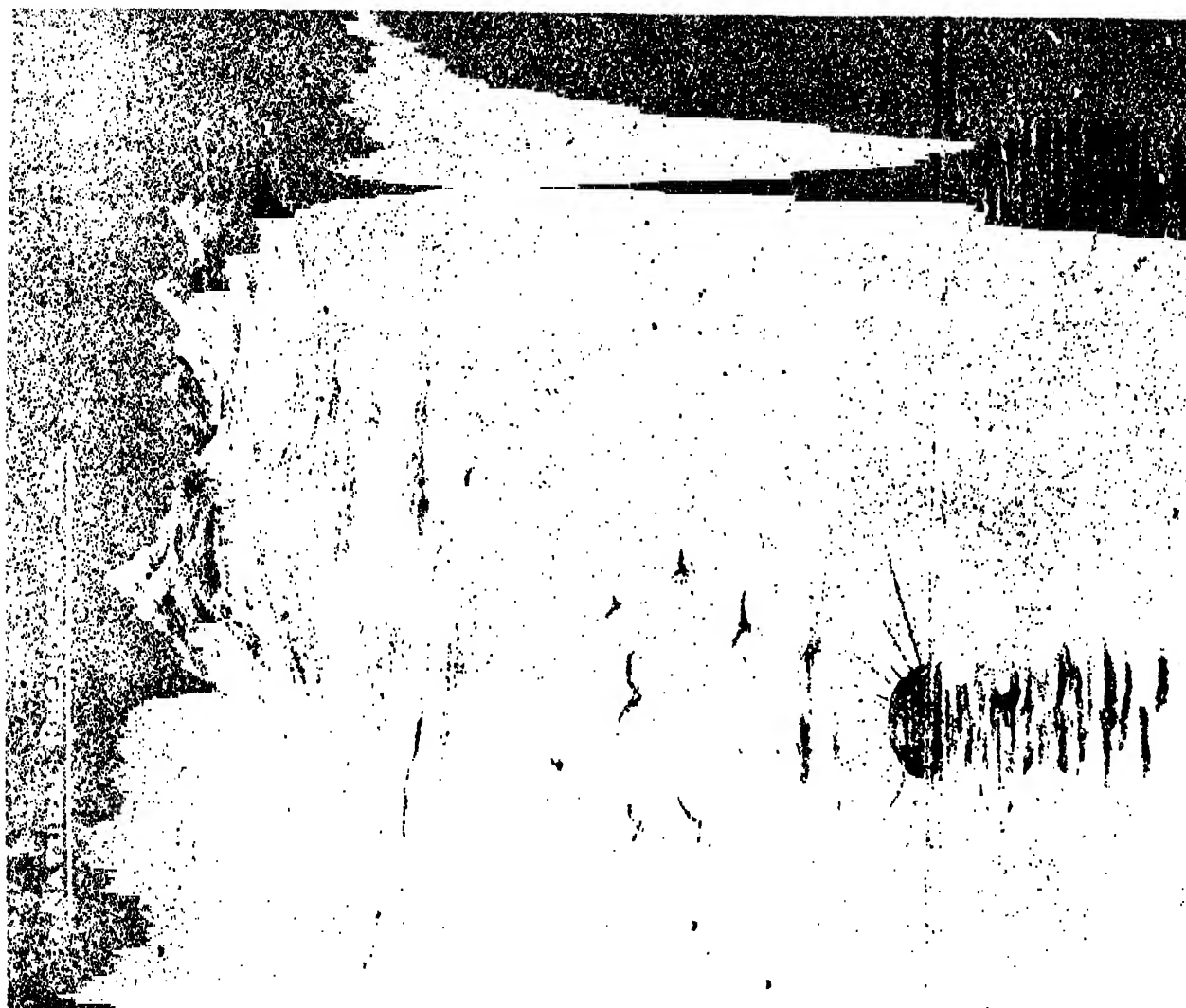


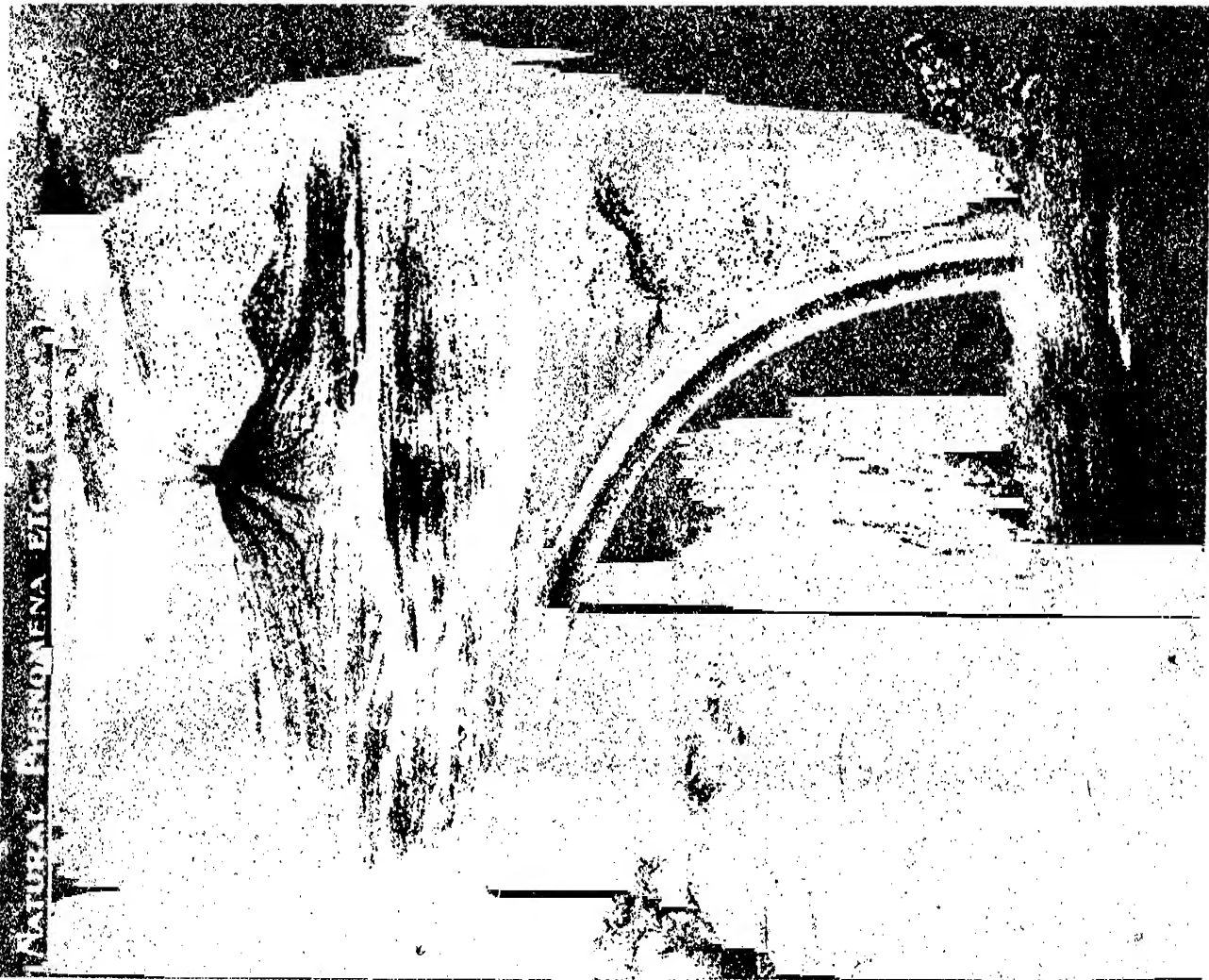
VEHICLES (CONT'D)



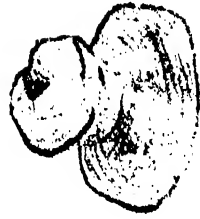
OBJECT LESSON ILLUSTRATIONS CONT'D
OF THE
MULTI-LEVER & BOLT ETC



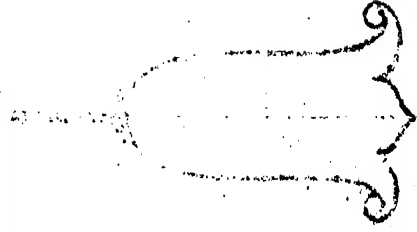
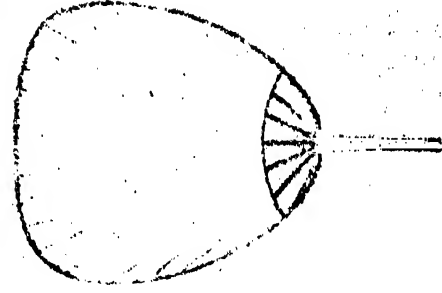
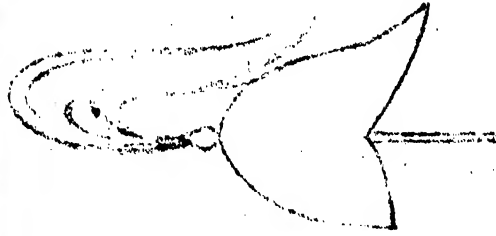




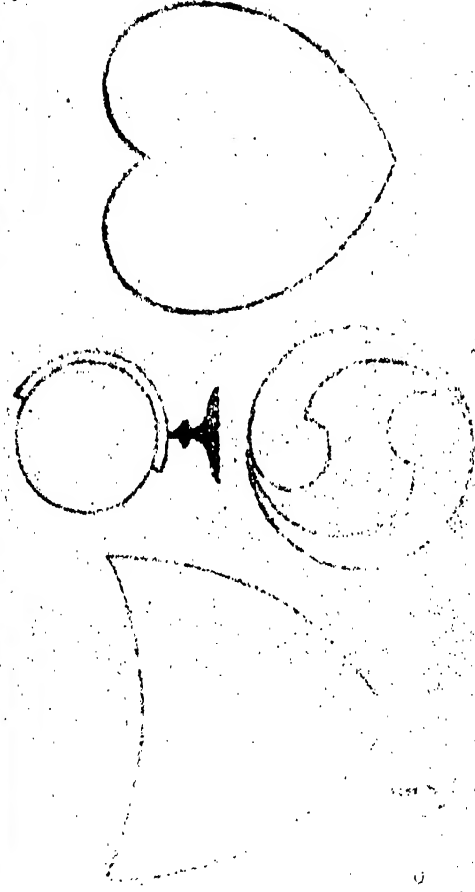
STAGE XI b. LIGHTER OR DARKER OUTLINE ADDED
TO DEFINE FORM WHEN IRREGULAR.



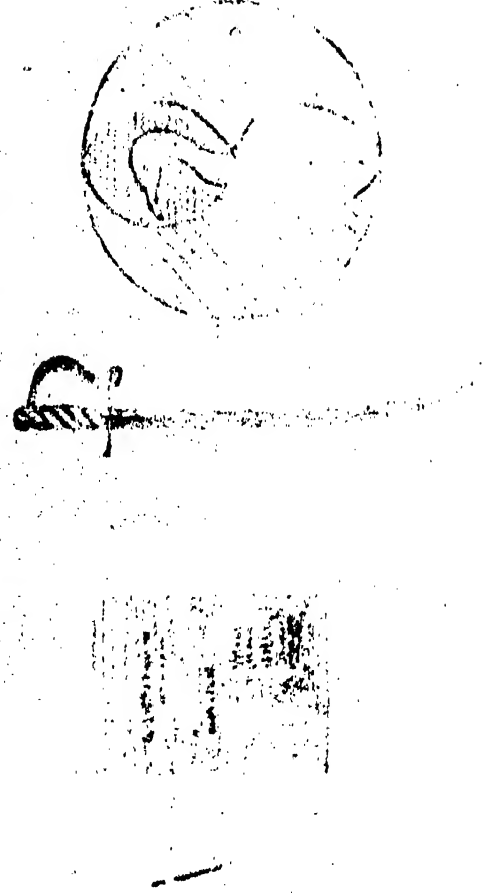
STAGE XII a PURE OUTLINE, BOLD & SIMPLE.



STAGE XII b. PURE OUTLINE - ORNAMENTAL, ETC.



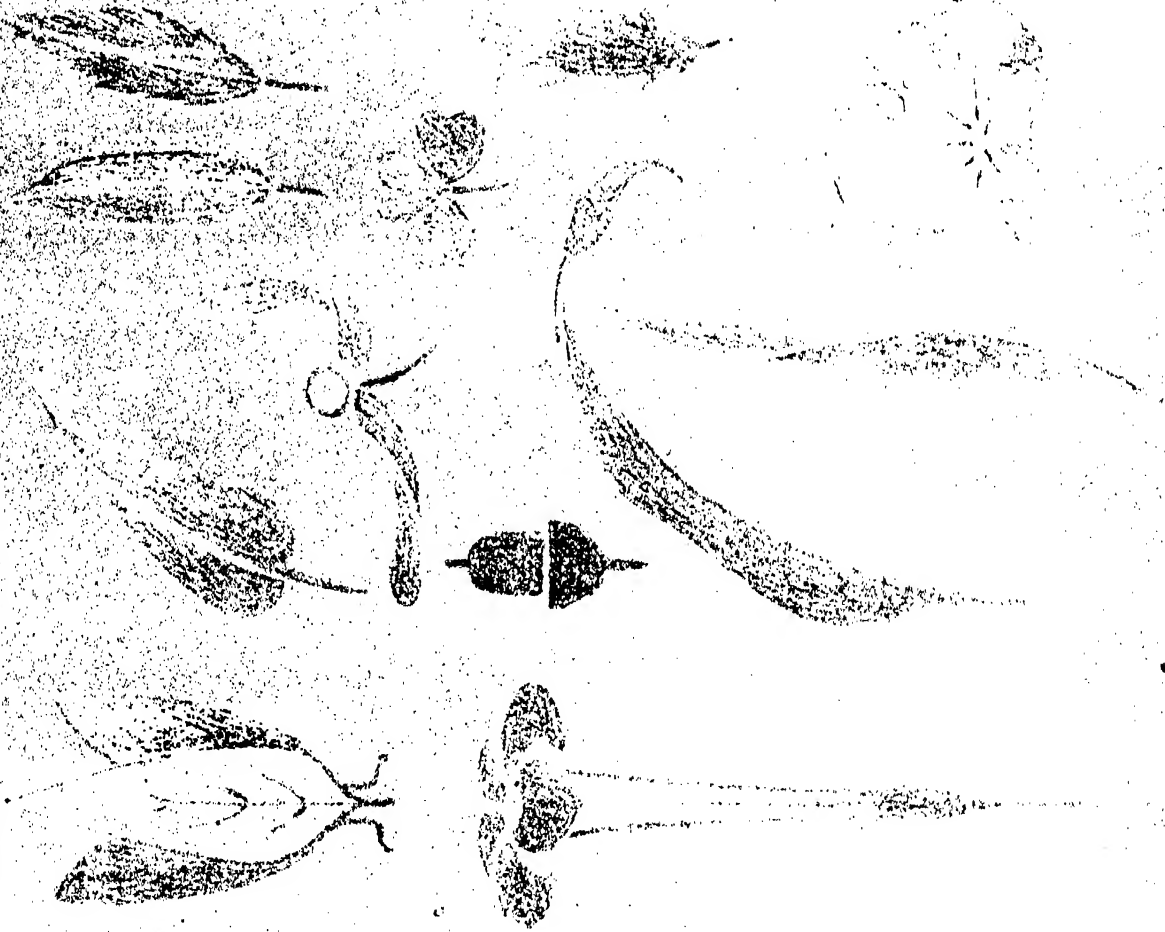
STAGE XIII. FILLING-IN ADDED TO OUTLINE.



FORMS SIMILAR TO BRUSH-STROKES



BRUSH-LIKE STROKES APPLIED TO FLOREAL, ETC.



TO EXEMPLIFY CORRELATION OF PROCESSES
IN INFANT EXERCISES

MODELLING



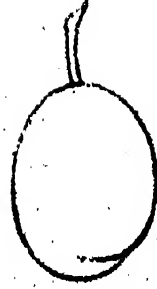
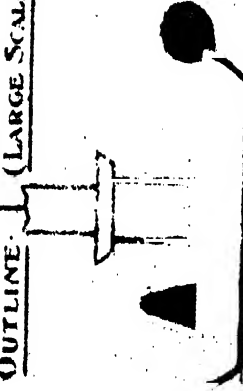
MASSING



PAINTING

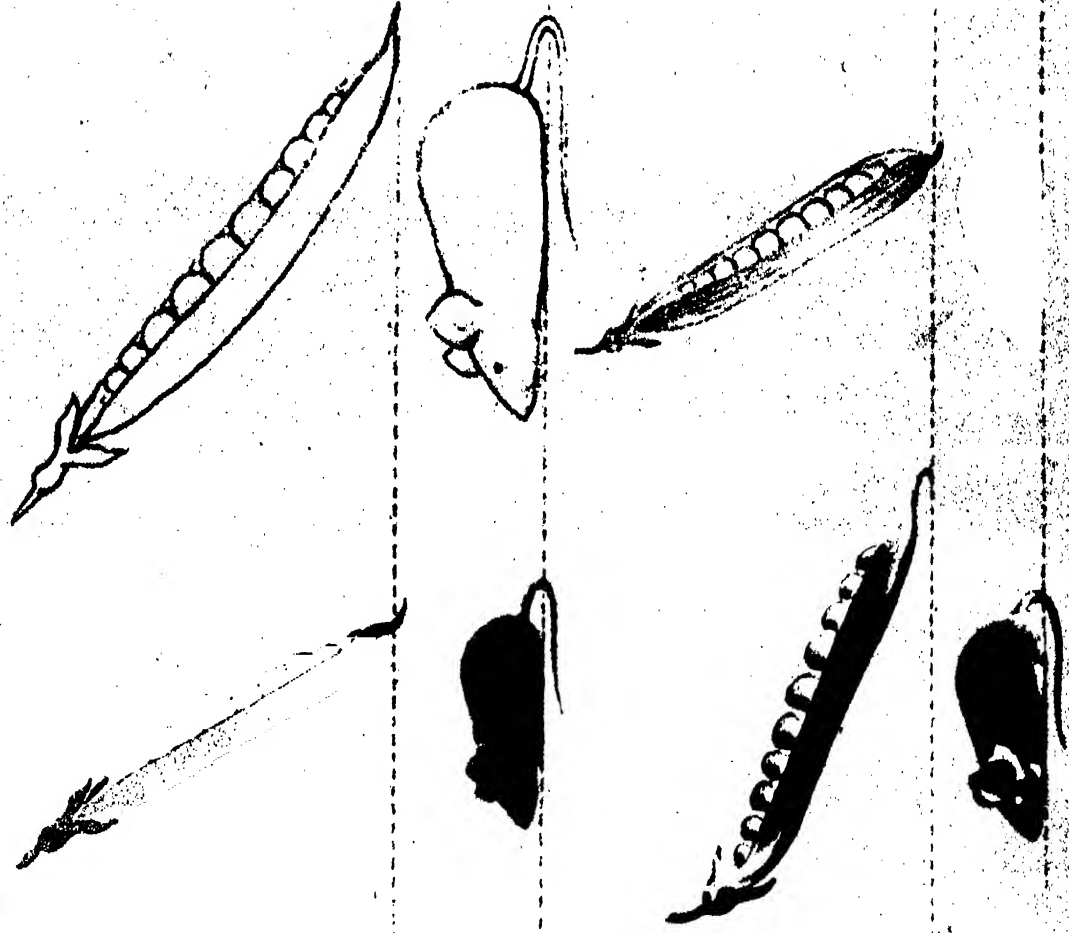


OUTLINE (LARGE SCALE)



TO EXEMPLIFY CORRELATION OF PROCESSES

IN INFANT EXERCISES. (CONT'D)

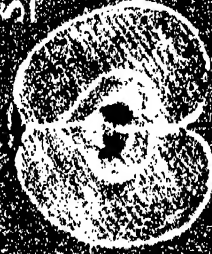




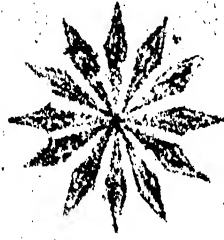
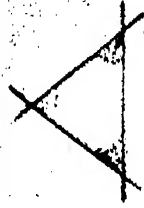
Nuts, Fruit, Vegetables, etc.



Sections

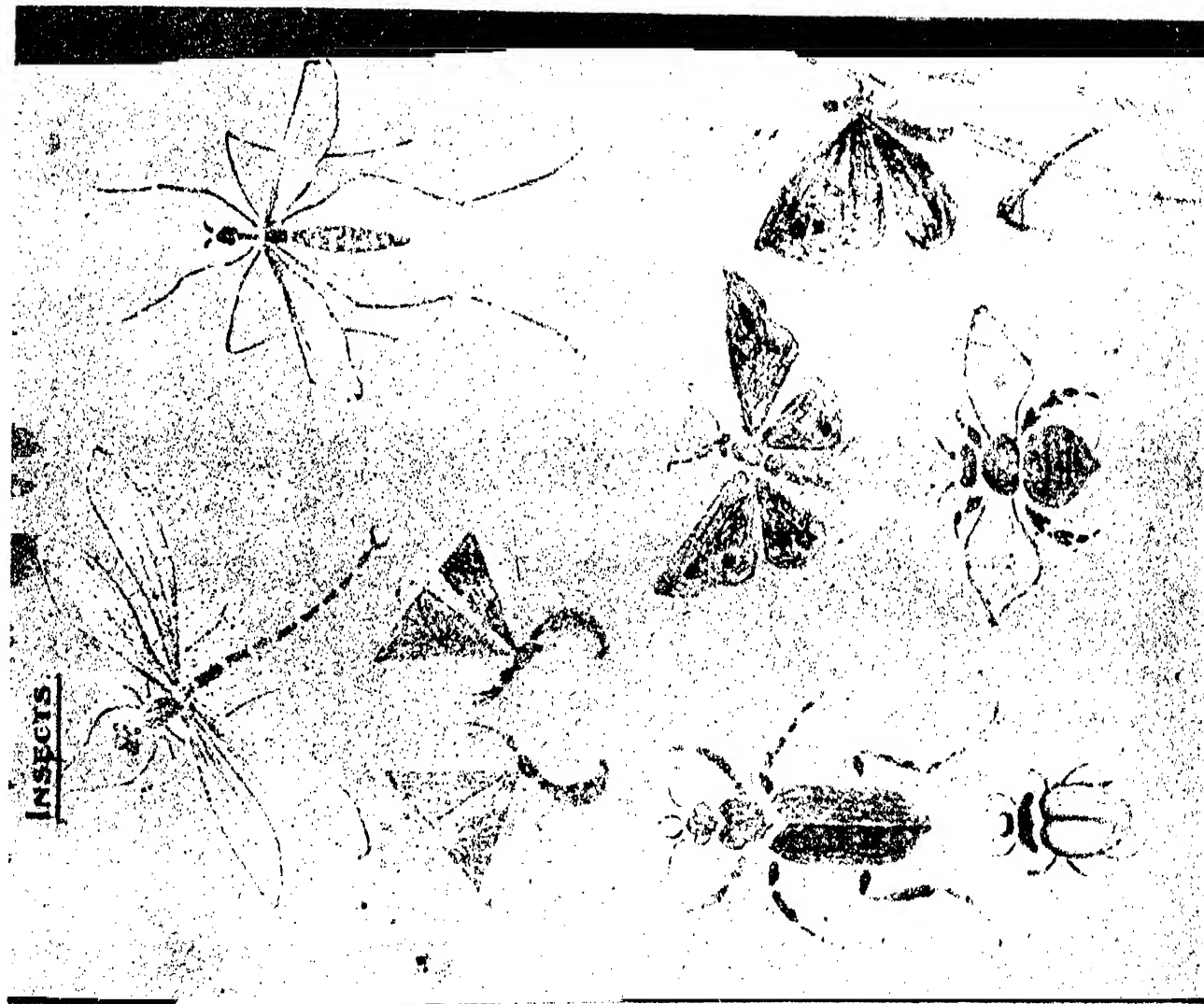


CRYSTALS. SHELLS ETC.



CRYSTALS

INSECTS



BIRDS ETC.

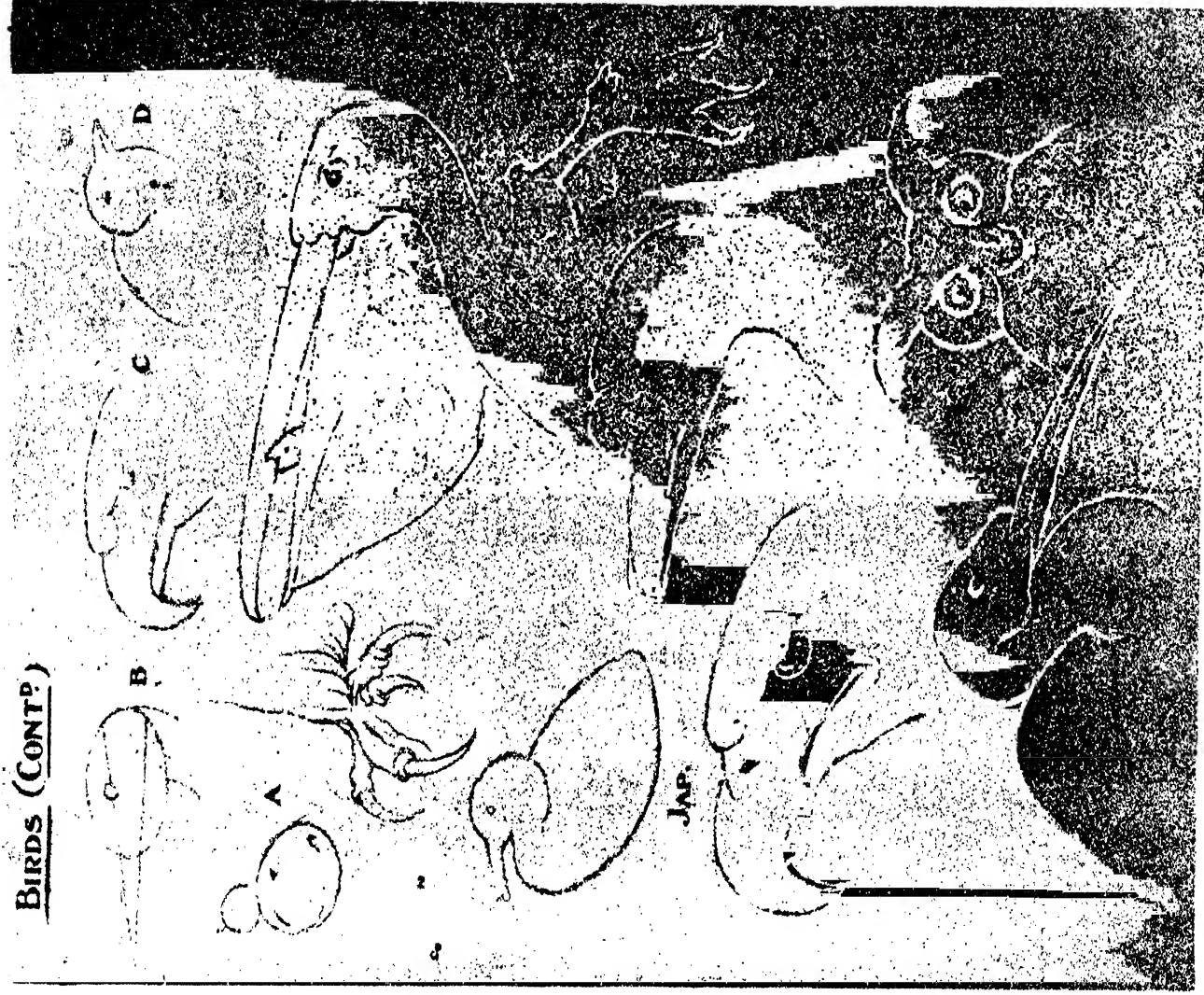


BIRDS (CONT'D)

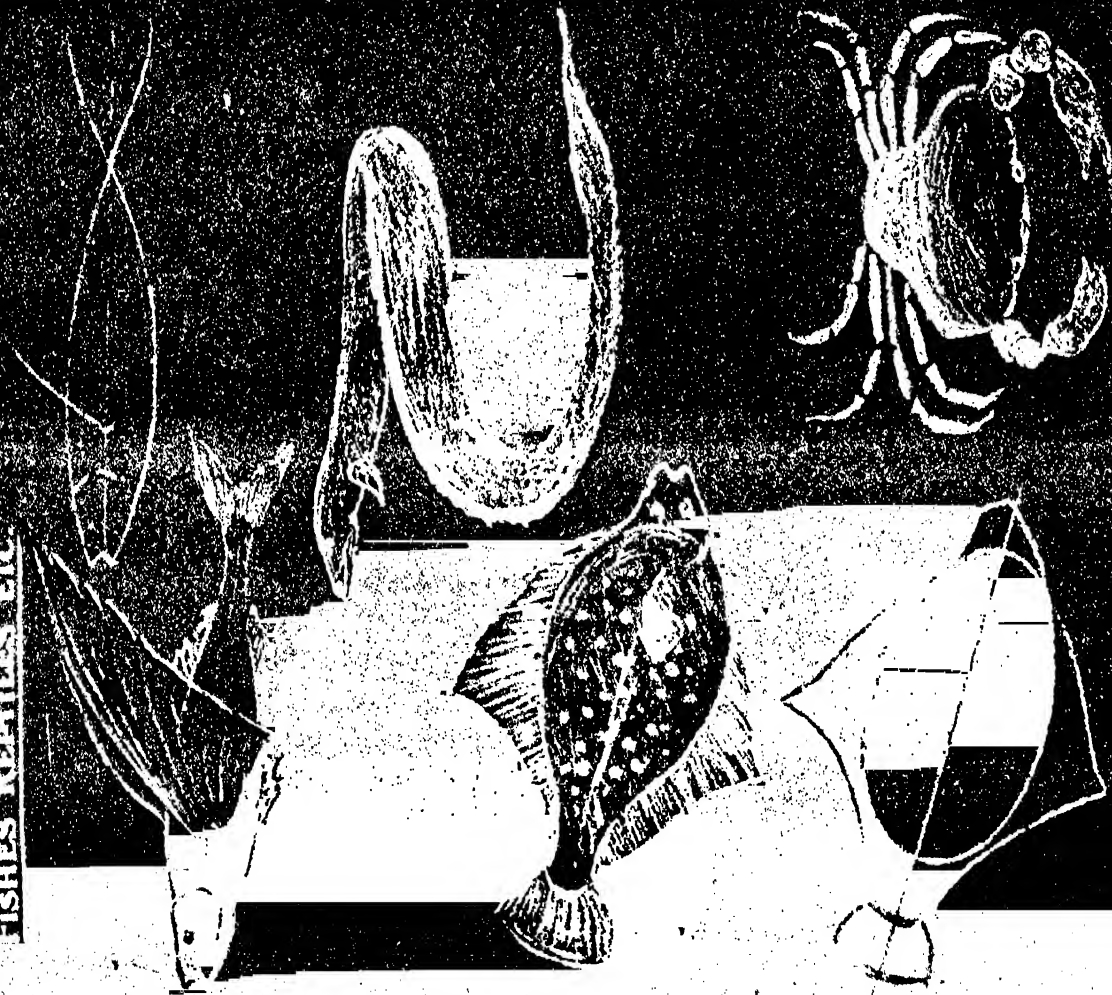




BIRDS (CONT'D)



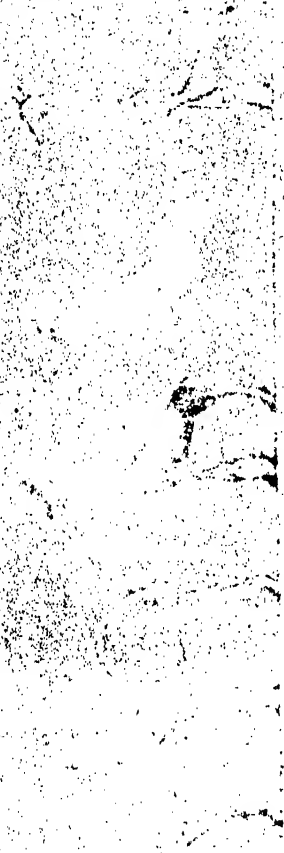
FISHES REPTILES ETC.



FISHES REPTILES ETC. (CONT'D)



BEASTS, ETC

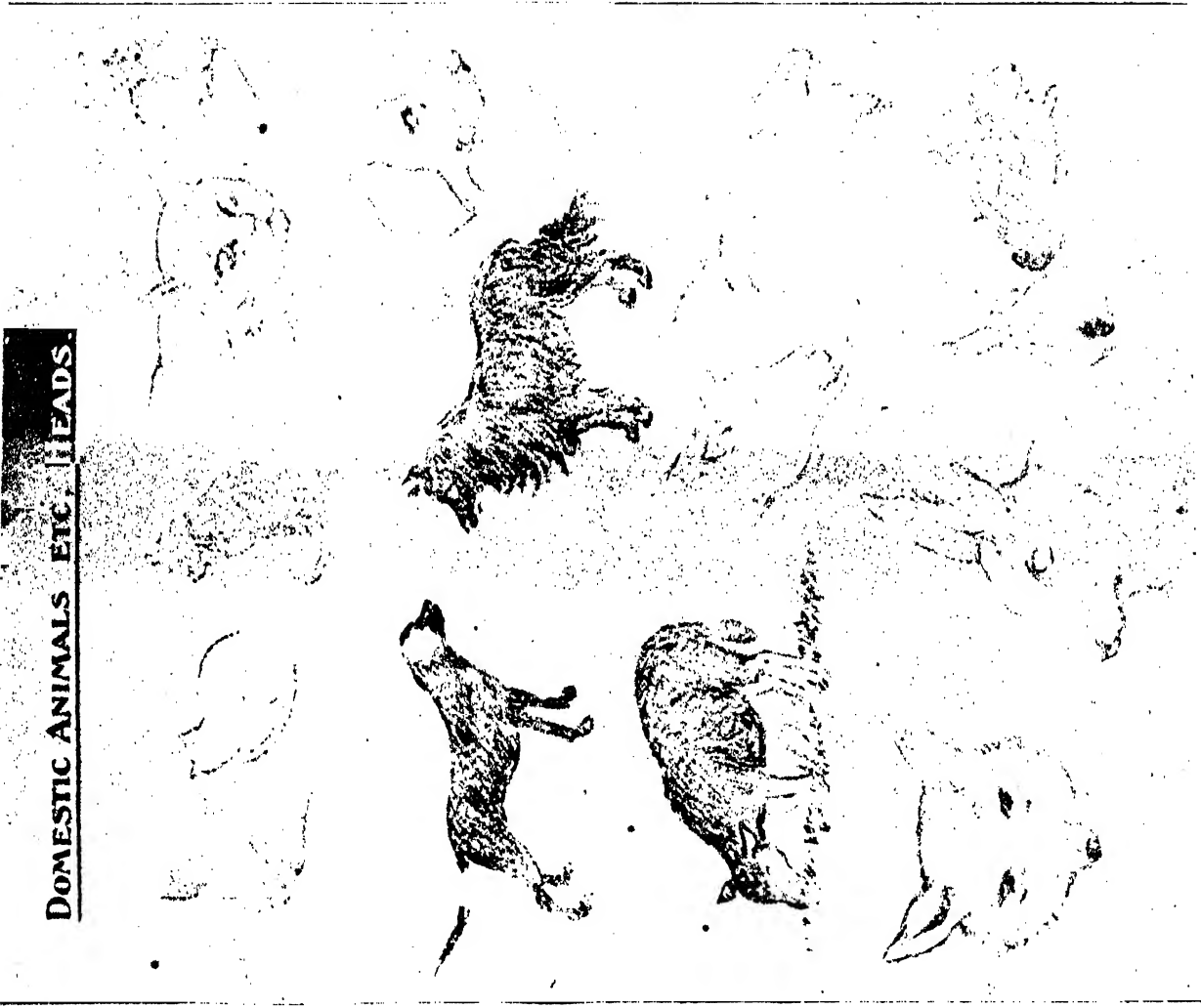


Egyptian

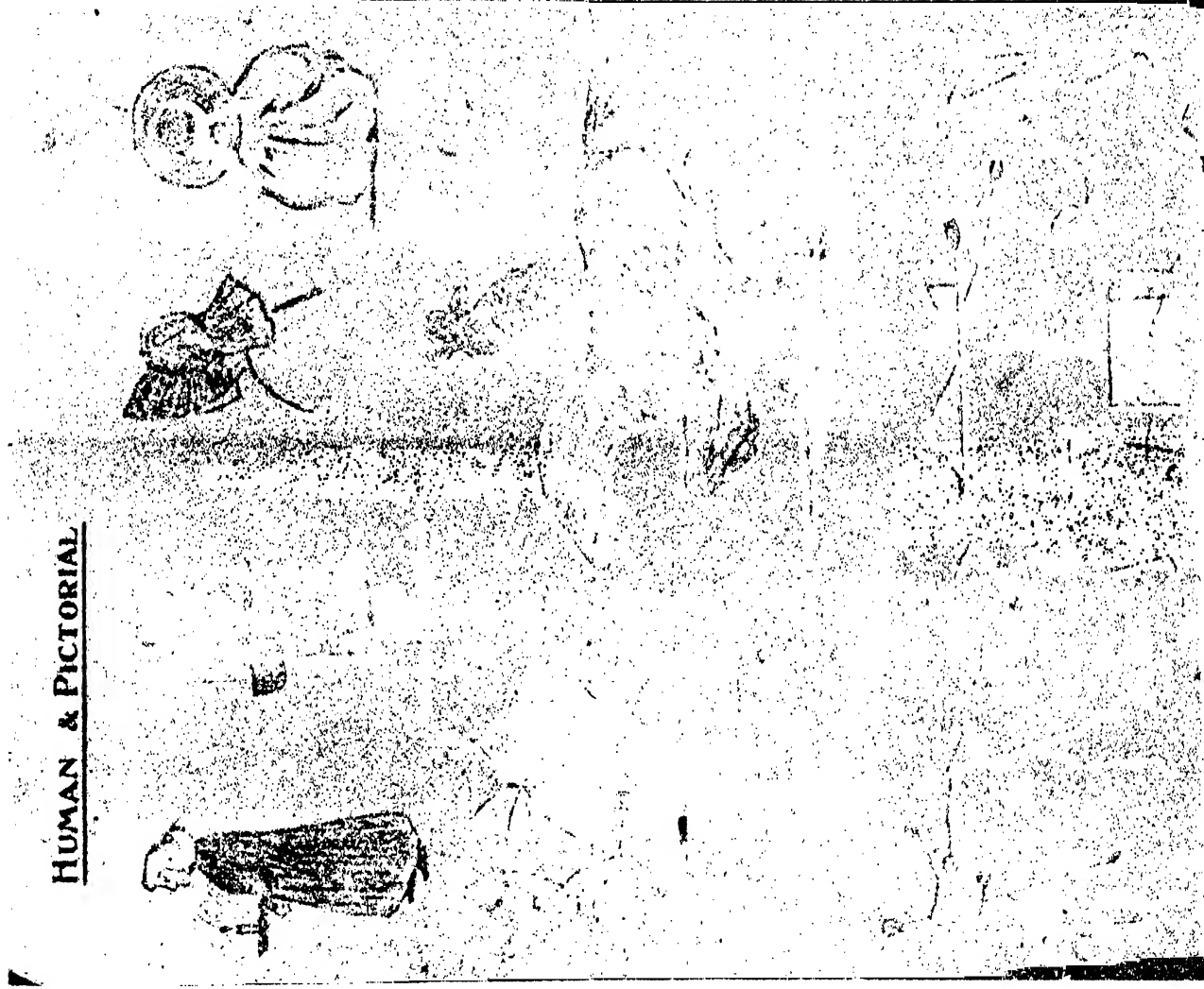
BEASTS, ETC CONT.



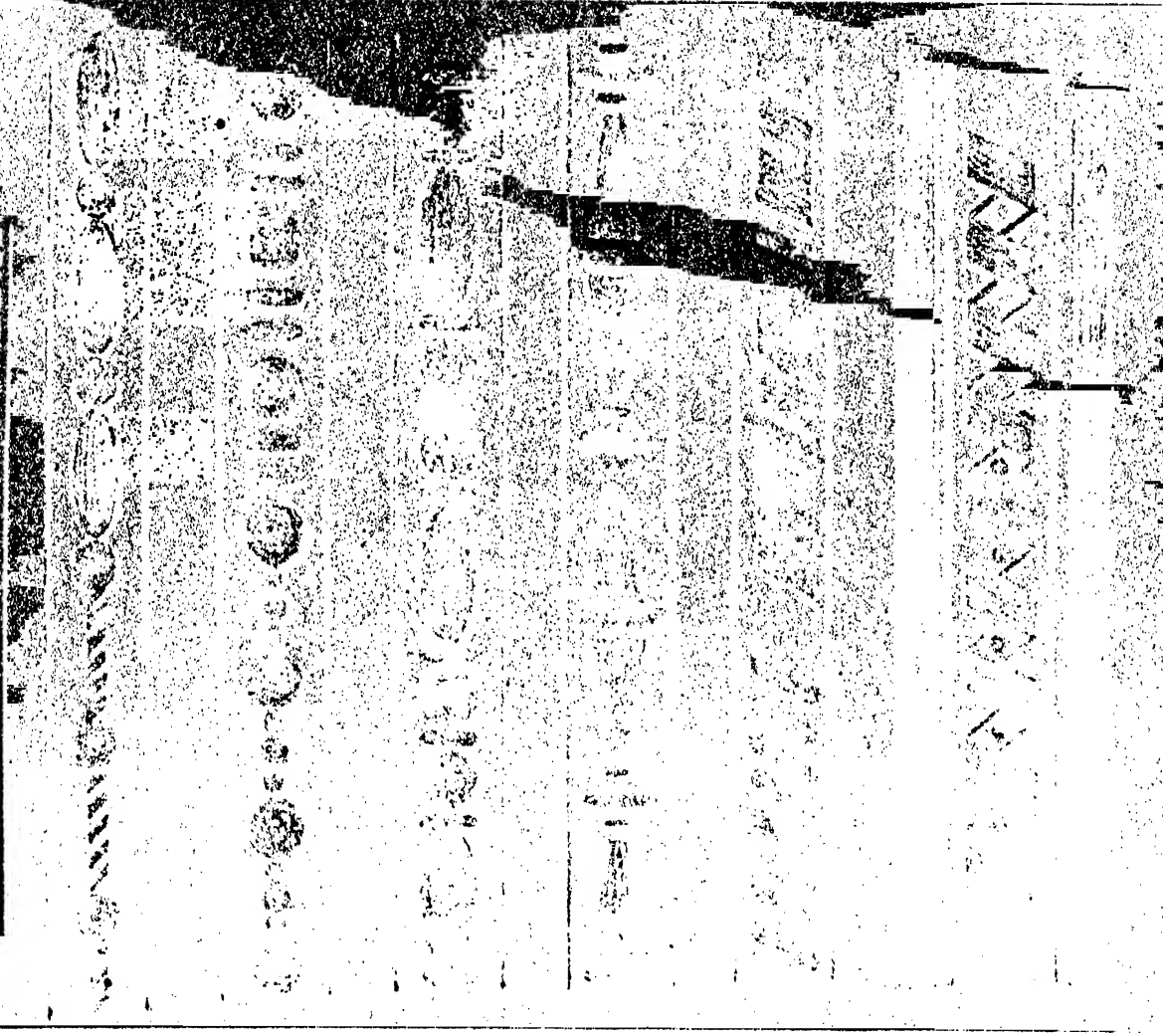
DOMESTIC ANIMALS ETC. HEADS.



HUMAN & PICTORIAL



BORDERS DERIVED FROM MOUNDINGS



BORDERS CONT'D FLOWING & FLORAL



BORDERS CONT'D



RULER PRACTICE

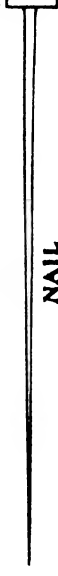
_____ 4 INS

_____ 3 INS.

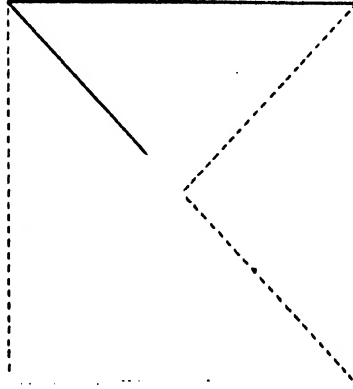
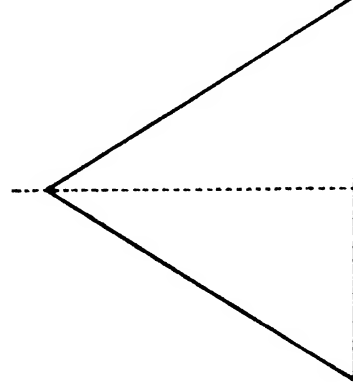
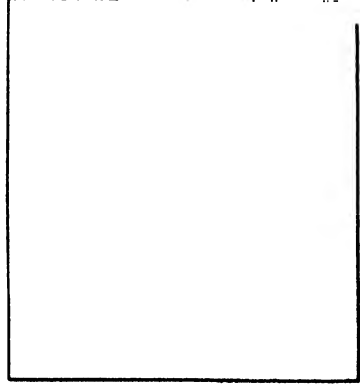
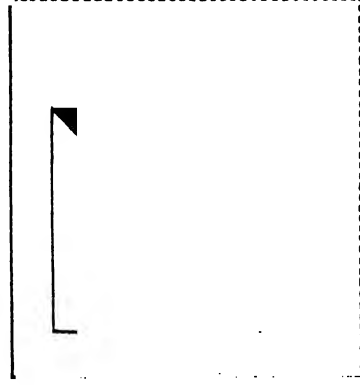
_____ 2 INS.

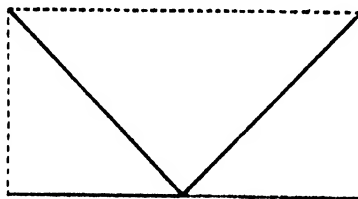
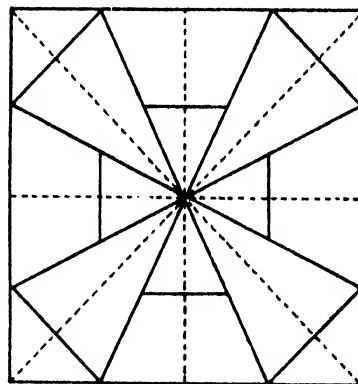
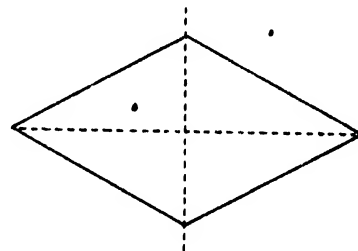
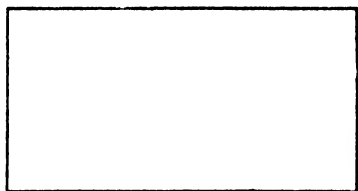
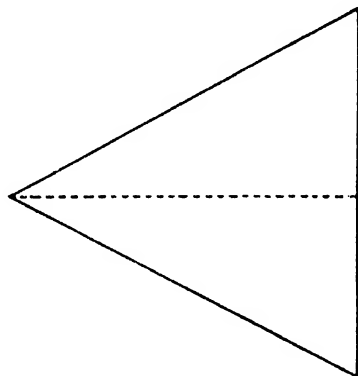
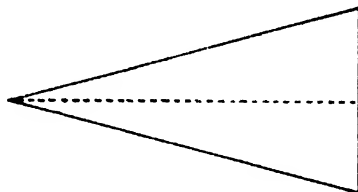
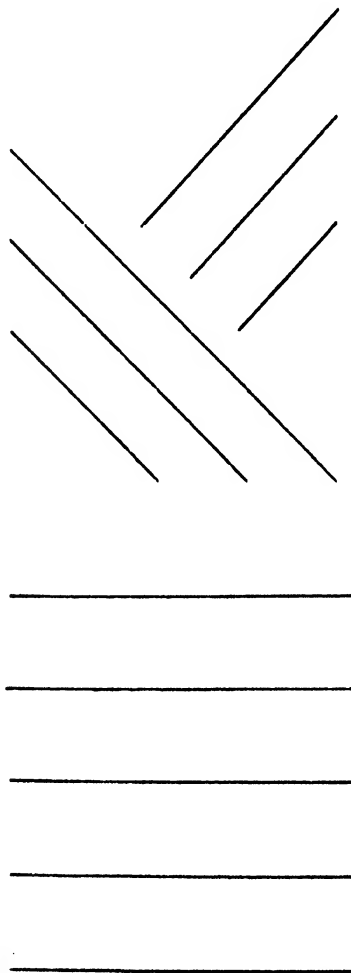
_____ 1 IN

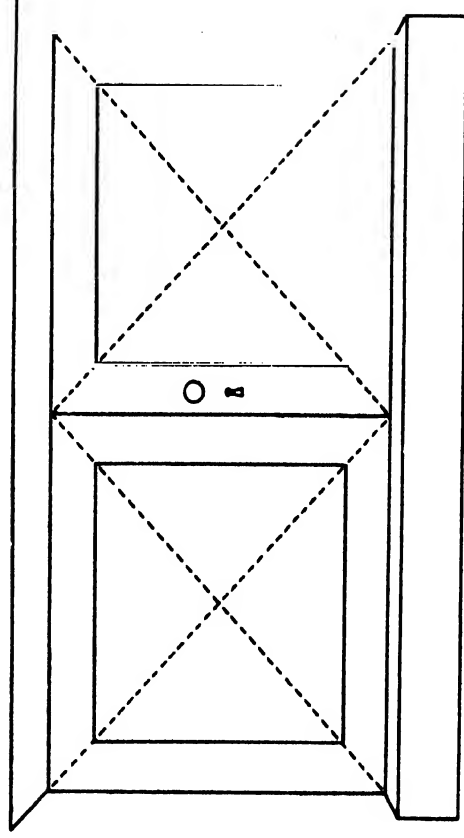
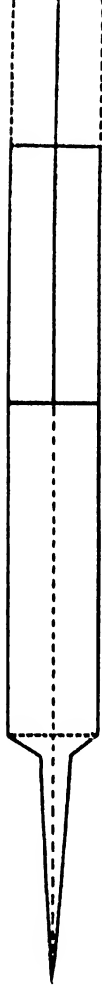
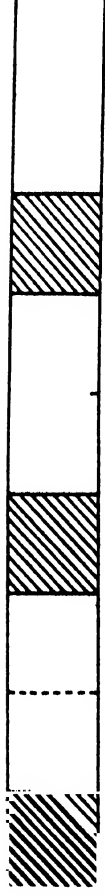
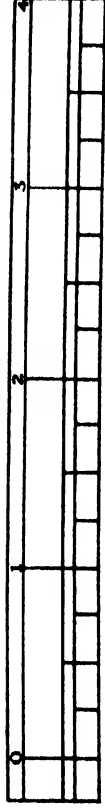
← 3" →

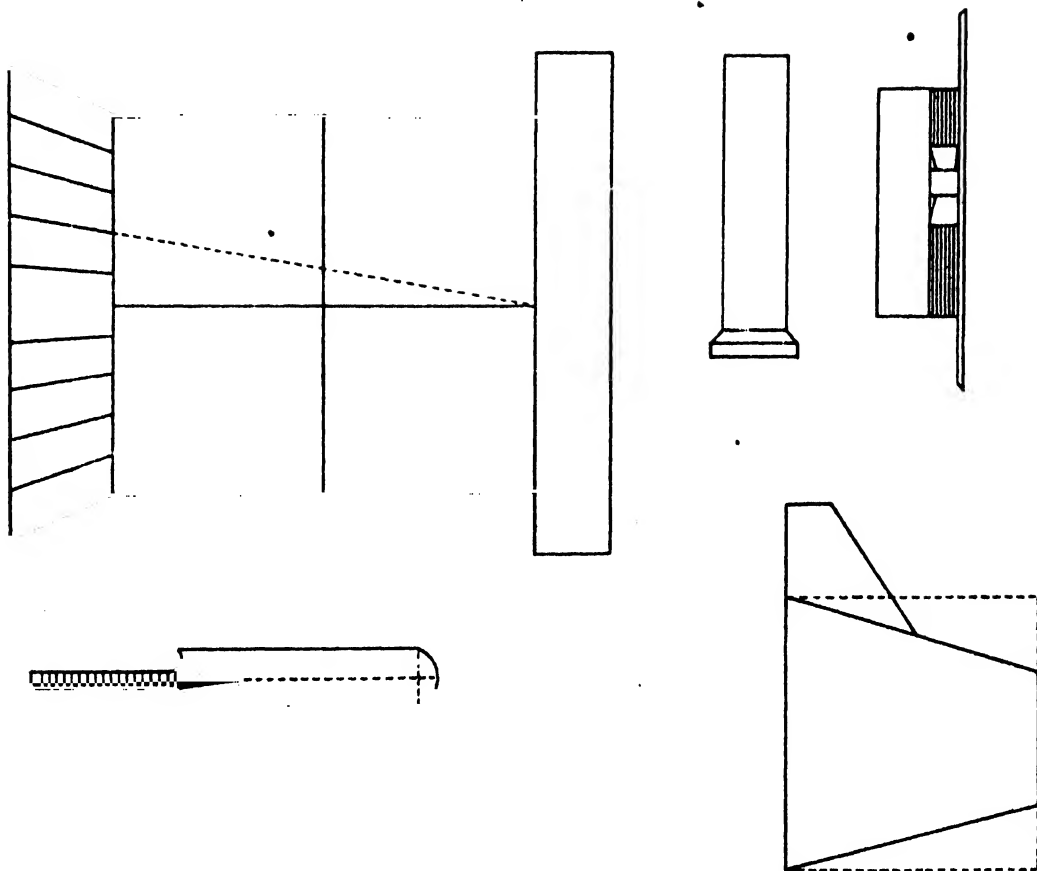


NAIL









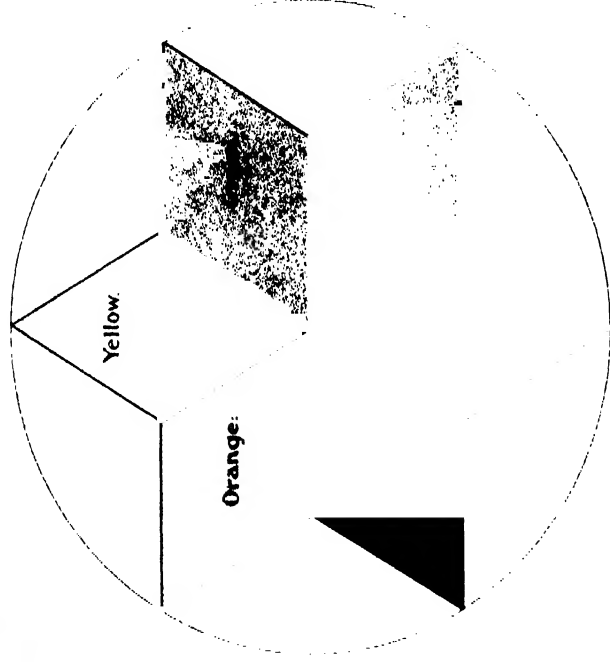
METHOD OF PUTTING ON WASHES & GRADATIONS.



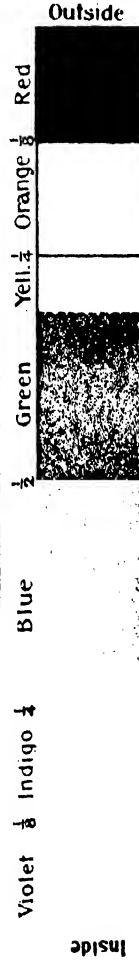
BRUSHWORK PRACTICE.



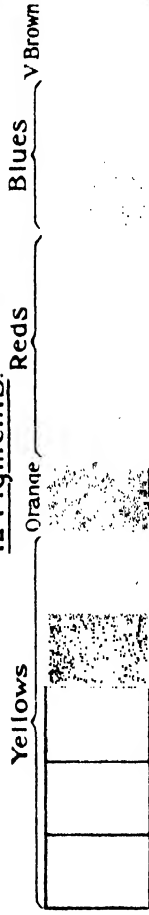
COLOUR HARMONY



Solar Spectrum



12 Pigments.



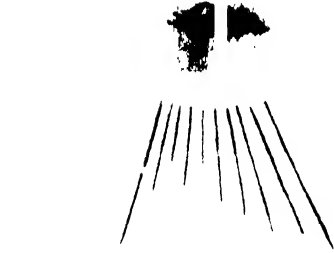
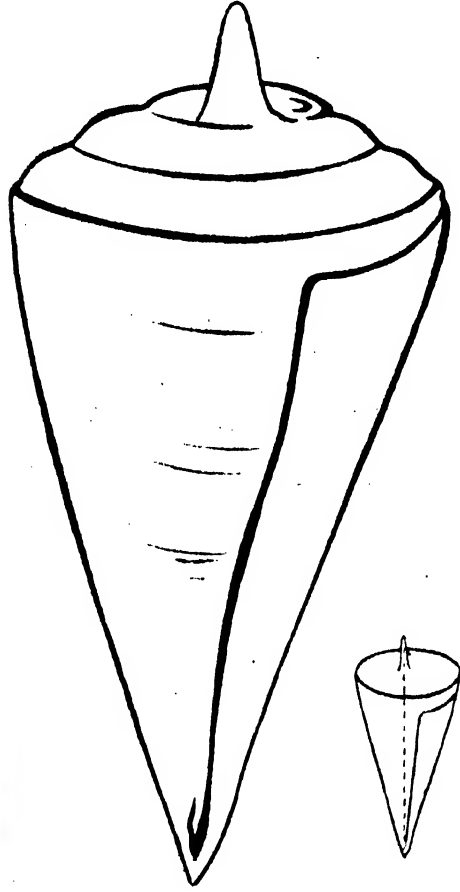
Lemon. Aureolin. Y. Ochre. R. Sienna. B. Sienna. D. Cadmium. Vermil^m. A. Crimson. Ind. Red. Cobalt. Ultramar. V. Brown.

PLATE XIV^D.

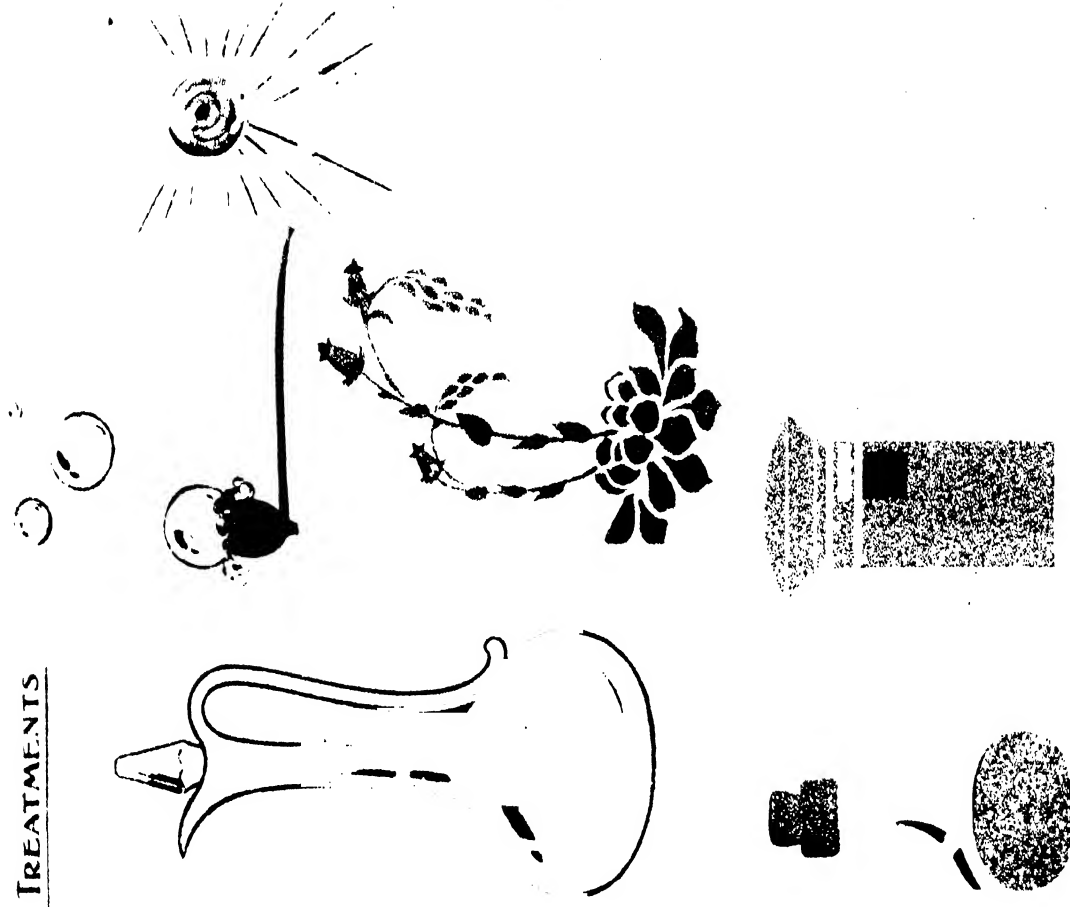
APPLICATION TO LEAVES, FLOWERS, FRUITS, ETC.



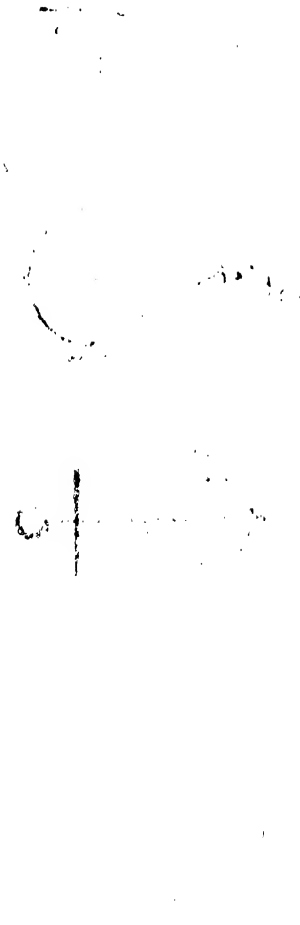
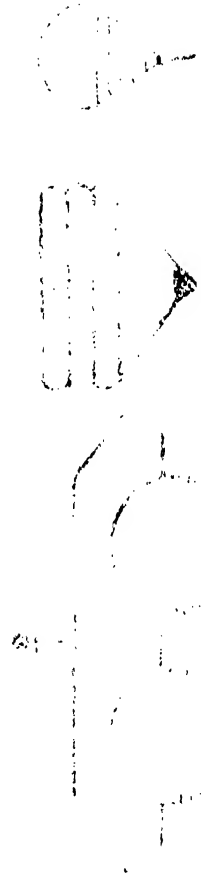
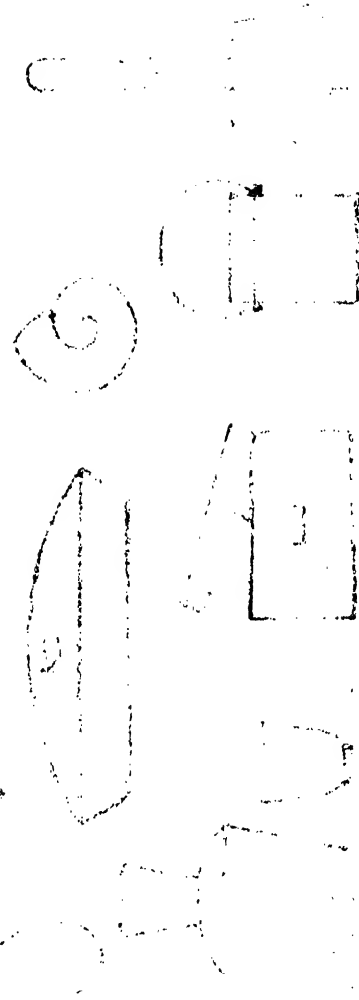
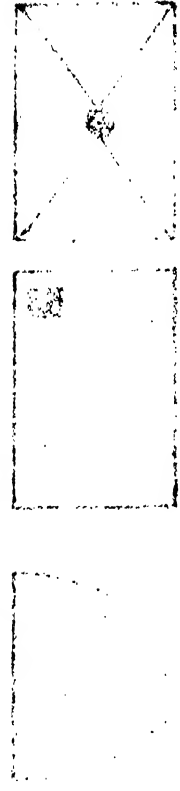
BOLD OUTLINES.

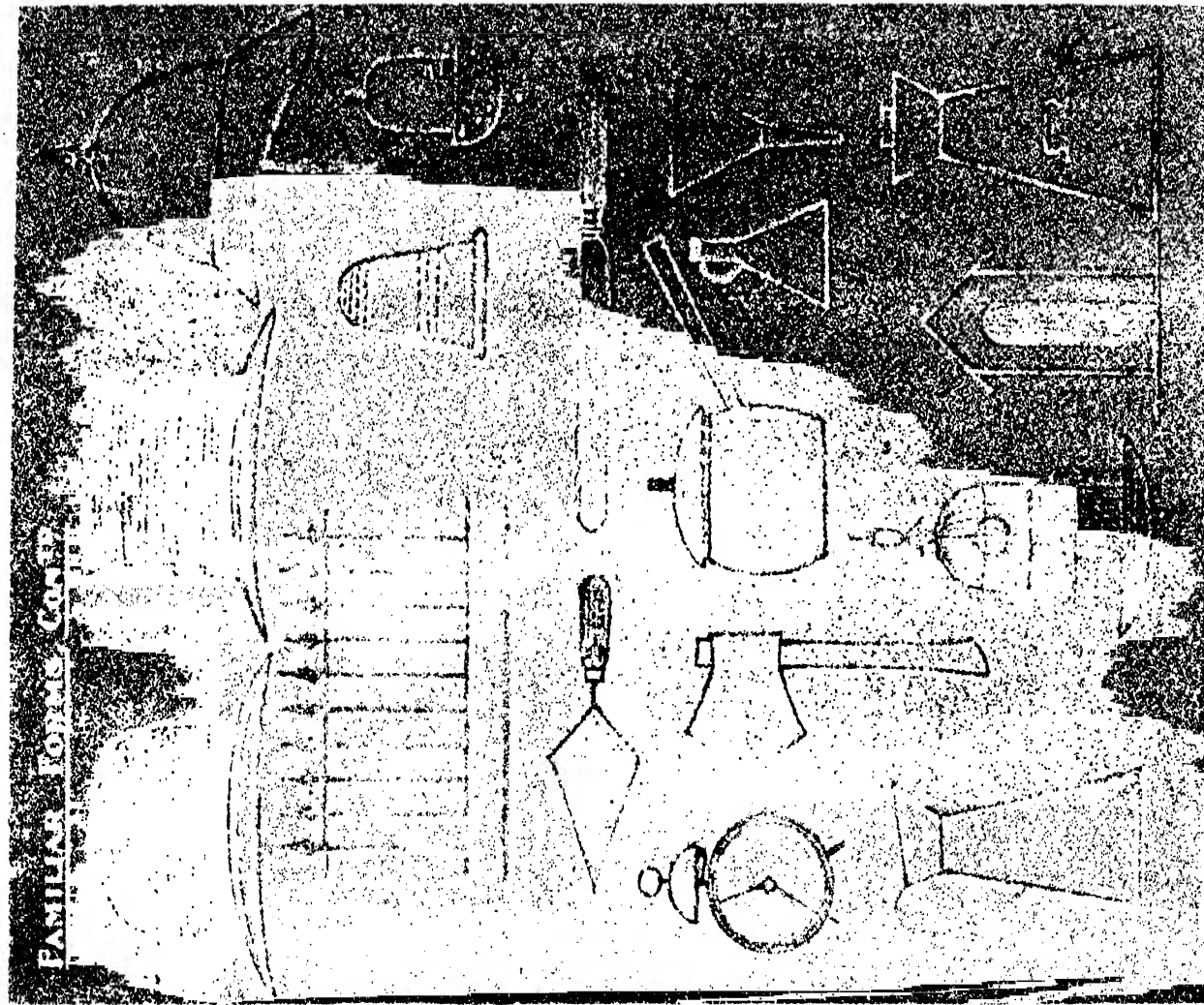


TREATMENTS

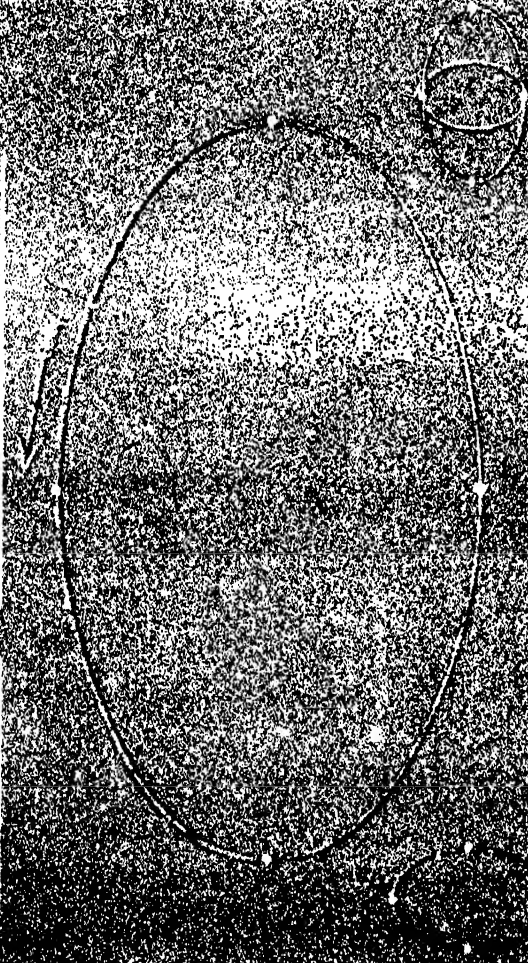


FAMILIAR FORMS.



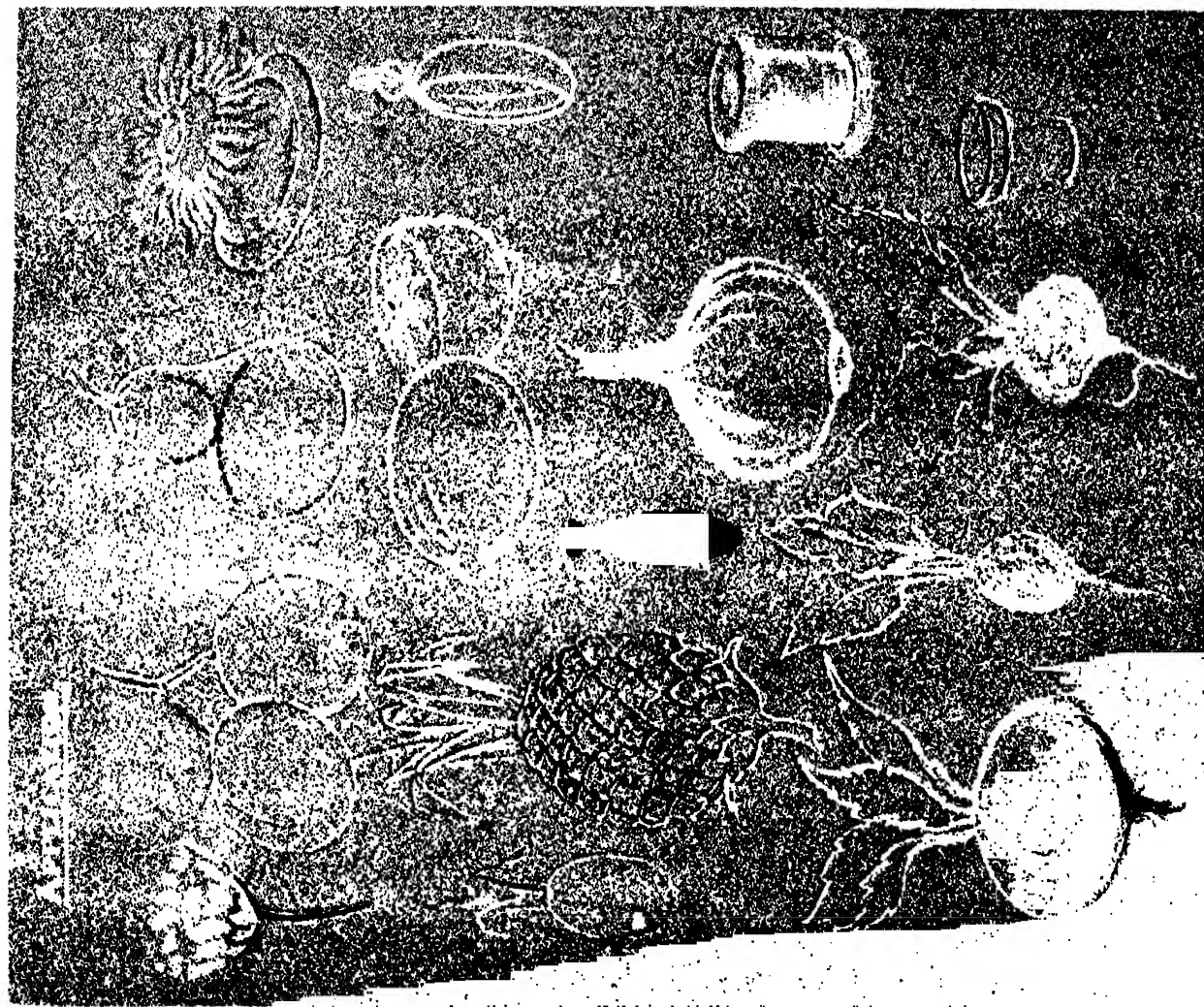


KEY EXERCISE ELLIPTICAL CURVE

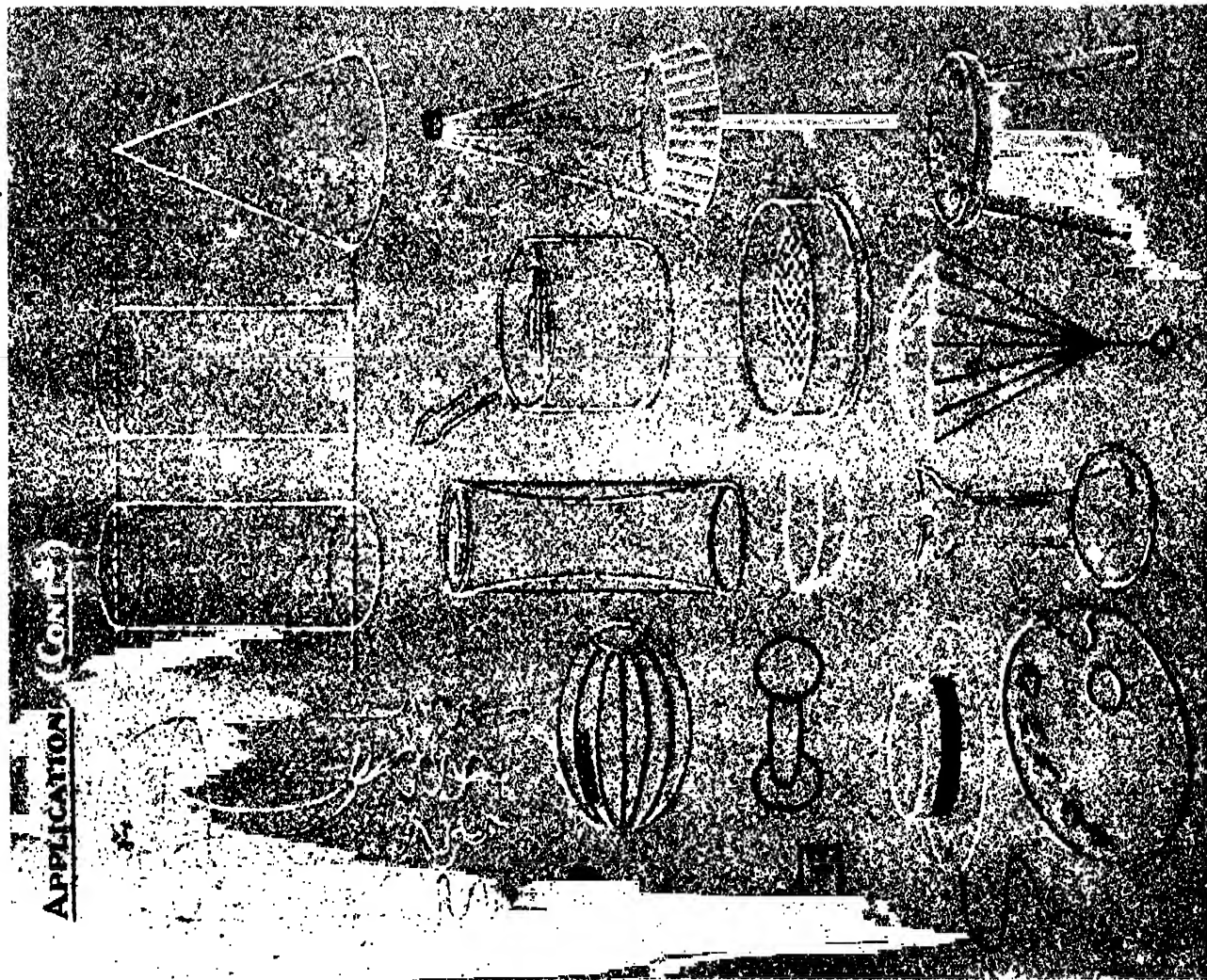


2 STAGES IN FIRST EXERCISE

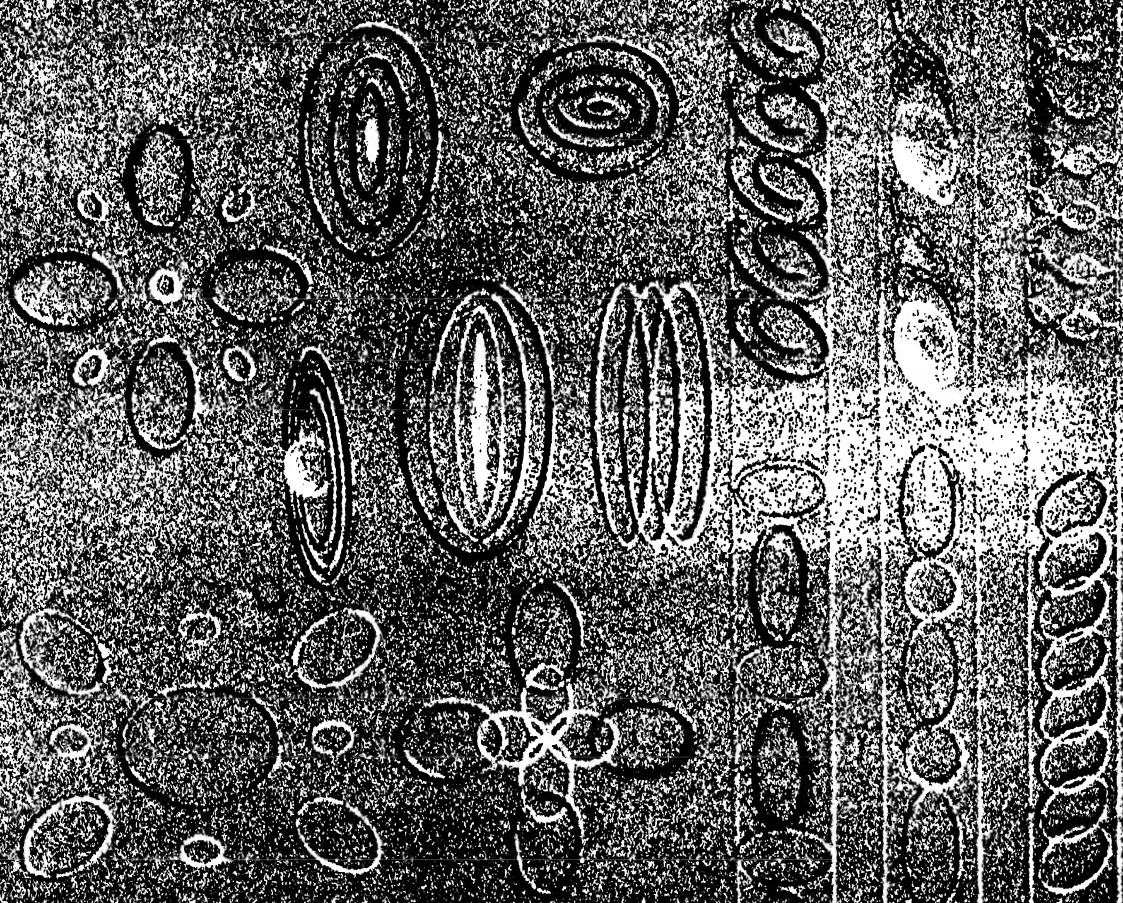




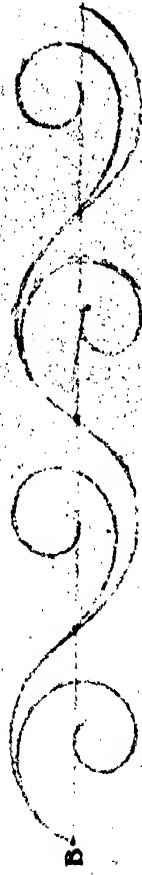
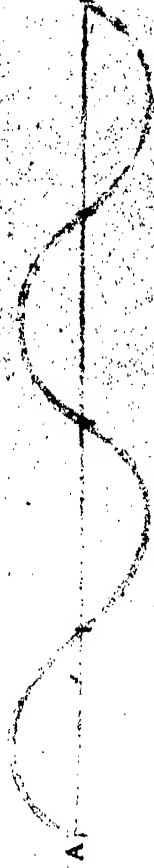
APPLICATION (Cont.)



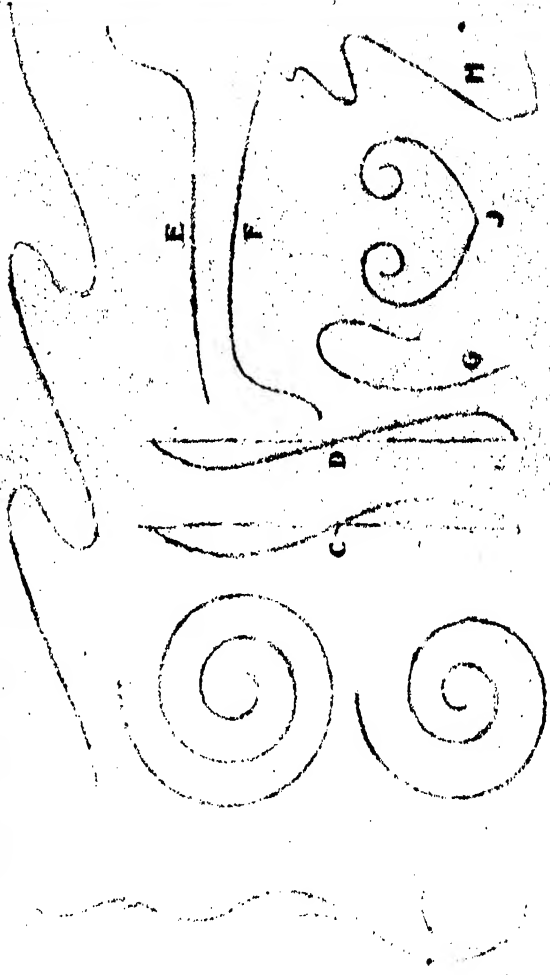
ORIGINALITY



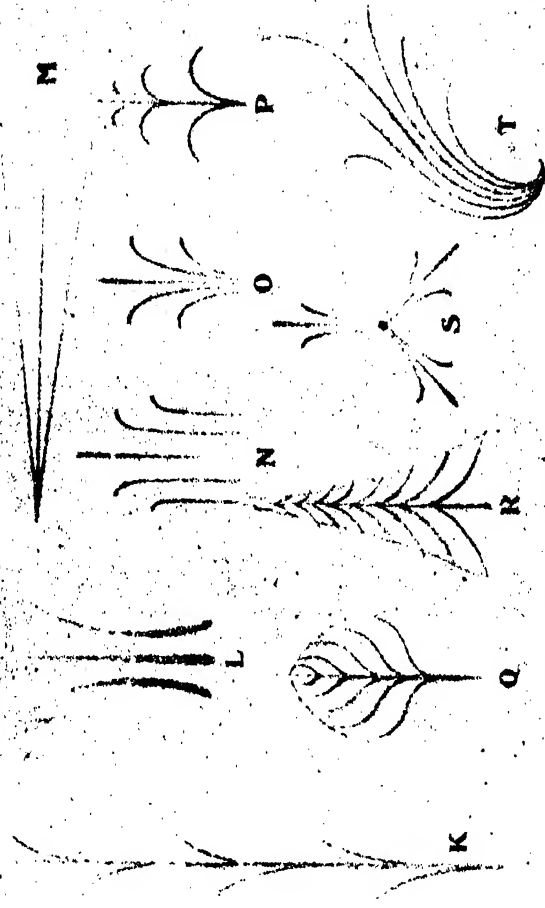
I. COMPOUND (WAVE OR SERPENT) CURVES.



II GROWTH OR DIRECTION LINES.



III. RADIATION.

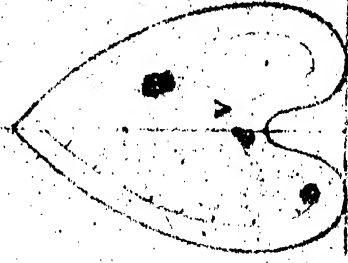
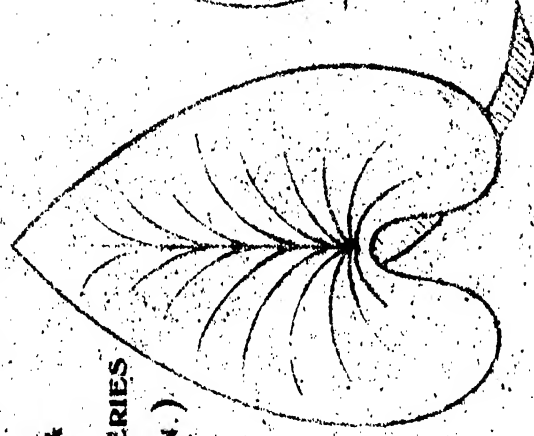


EXAMPLE OF COPY SET FROM

WADDINGTON &

JACKMAN'S SERIES

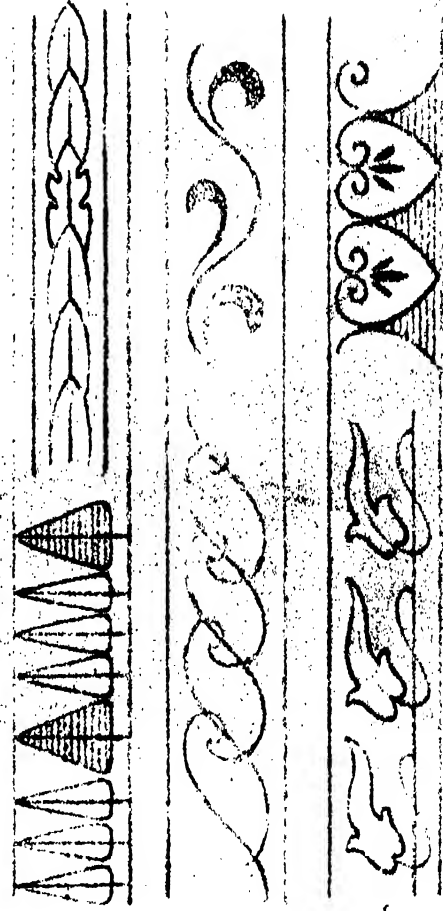
(WILKINSON.)



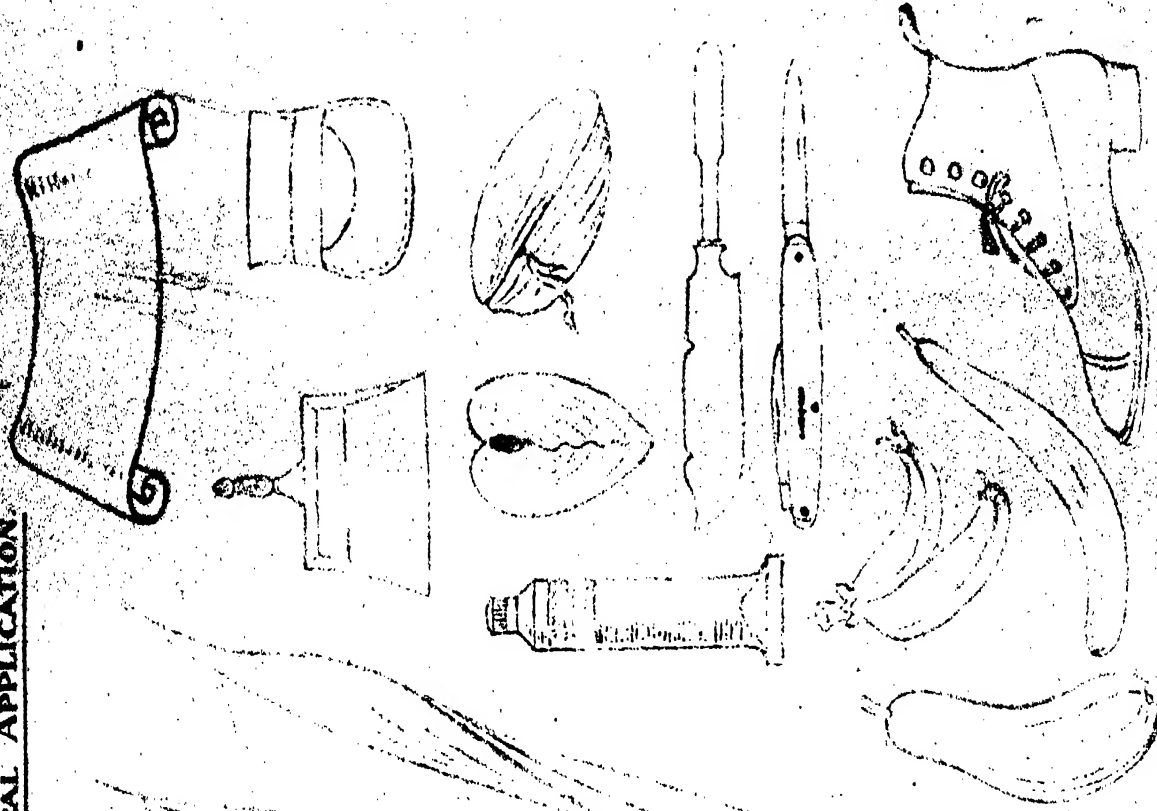
V. VASE & BOTTLE FORMS.



VI. ORNAMENTAL.



VII. GENERAL APPLICATION.



Natural and Common Objects in Primary Drawing

This section has been compiled to assist primary teachers in meeting some special requirements in the class teaching of drawing. It deals with but a specific phase of the subject, one which requires emphasis.

The selection of suitable objects in proper gradation becomes a serious, if not indeed the main, problem of the teacher; and here a consistent and logical sequence is required. This is not an easy matter, particularly in the choice of simple objects for the lower classes, or in the suggested correlation with other school subjects.

Hence these hints and suggestions—they pretend to nothing more—based on the Syllabuses of the English Board of Education, and the Scotch Education Department.

The one fundamental educational purpose of drawing is to get children to see, and to record faithfully what they see. Concurrently they may design and create; for that is innate in them and can be counted upon at all times. At the same time their aesthetic sense will be sufficiently developed in every exercise that develops their perceptive powers. It requires the training of an expert draughtsman to depict adequately and accurately the exact appearance of the simplest object. Yet the main and essential facts of appearance can be rendered more or less approximately by the youngest children. This is all that is required. The nearer approach to the ideal of perfect accuracy only comes by the careful cultivation of their powers at school. Hence the teacher's concern to work along the right lines in whatever scheme he adopts.

As a handbook for teachers—both for those already in practice and for those in training colleges—it is hoped that not only will the scope of this section be seen at a glance, but that it will further prove its utility as a source of frequent reference when the direct advice from a visiting expert is not available.

Needless to say, it presents no actual copies of any kind for the teacher to reproduce; and its views are based on a general consensus of opinion amongst drawing experts at home and abroad.

Purely theoretical or controversial points are left quite alone, or only just touched upon where they arise.

I. W. T. V.

NATURAL AND COMMON OBJECTS IN PRIMARY DRAWING

I.—GENERAL PRINCIPLES, INCLUDING PLAN OF WORK

The question is sometimes asked: "Why should Drawing be taught in our schools at all, and what practical end does it serve?"

In the first place, it puts into the hand of the scholar—boy or girl—a new means or language of expression, the "graphic" power, perhaps the earliest known form of expression.

This is its general and educational value, and all scholars can be trained to put it to this "correlative" use in other cognate school subjects; in other words, to illustrate "graphically" what cannot be so well described "verbally". For instance, it may be used in History, Geography, Botany, Physiography, Geology, Chemistry, Mechanics, Physics, and, of course, in Manual Training and Essay-writing.

This use quickens their observation to a remarkable degree. In consequence, the most pertinent reply to any critic who would question the utility of Drawing would be to elicit from him, by choice, either a "written" or "delineated" description of, say, an aeroplane or dirigible balloon. If unable to use the pencil to good purpose, either from want of observation or from want of training, that critic would in such a case find himself greatly handicapped through his incapacity to draw illustrative diagrams.

Memory Drawing, Illustrative Drawing, Nature Drawing, lie therefore at the foundation of all educational drawing.

In this general sense scholars can be brought to the same state of efficiency in Drawing as they can in Writing, Singing, Drill, &c. In either case it is the class teacher who carries

on the exercise. Drawing is in fact the earliest—as it is the most natural—form of “Writing”, both of the individual and of the race.

Secondly, it has a distinctly utilitarian, industrial, or commercial value.

In endless vocations and crafts it is indispensable, and although the primary school is not the place in which to specialize to any particular degree in craftwork, none the less the basis of all constructive and decorative drawing can be firmly laid in juvenile days by careful “technical” drawing, involving simple geometrical and scale drawing. Girls require this equally with boys. Under this heading comes also the practice of good “Lettering”.

Lastly, and superadded to all this, comes as much of the direct cultivation of the aesthetic sense—by the manipulation and copying of moulded form; by practice in colour; by study of atmospheric effects; by artistic surroundings, artistic dress, artistic arrangement of flowers; by appreciation of good pictures, and a slight knowledge of the architecture of nations—as can conveniently be worked into the general routine of lessons.

Some enthusiasts would place this last object first, or consider it the sole object; but it inevitably finds a secondary place in the general curriculum of school life, whatever we may think to the contrary, because it is largely extraneous and incidental. Time, or the want of it, is the great factor to be taken into consideration in school drawing, and under the most favourable circumstances it is always too short, or the lessons too infrequent, and the classes frequently much too large, the teaching “collective” and not “individual”.

Hence the teacher wants to know just what is required of him, and then how to do it expeditiously and successfully in the best possible manner.

This selection of graded models should materially assist to an understanding of what is wanted in the choice of right subjects, and the descriptive hints will be as brief and suggestive as possible.

It is a good plan, when an object has been drawn by the class as an isolated study, to endeavour during the last few minutes of the lesson to get the children to make a quick

sketch of it in its ordinary surroundings, or as they imagine these to be; or to show it being put to actual use, as, *e.g.*, after having drawn a kite, to show the boy flying it and the clouds to which it appears soaring, &c., &c. Or again, to draw from memory or imagination other objects which bear some relationship to it.

Teachers nowadays are pretty generally conversant with the latest requirements, but, to prevent any uncertainty on the point, there are given below: 1, Those portions of the lately issued Syllabuses of the "Preliminary" and "Certificate" Examinations of the Board of Education which referred to Drawing; 2, Such extracts from the recently issued "Memorandum" of the Scotch Education Department, on the Teaching of Drawing, as specifically bear on the points under notice. They are subject to revision or even withdrawal.

The aim in either case is to make Drawing a practical subject; and in due time we may arrive at that ideal state of instruction which arises from the co-operative association of a class of scholars in drawing, planning, designing, and making, say, a model doll's house, or a room fully furnished, to which each scholar has furnished his little quota of workmanship or decoration, or into which he can put some little bit of homely artistry: a flower-study conscientiously done, a butterfly carefully rendered.

This gives them an all-round view of things, and of the utility of drawing in all walks of life; but it is an ideal which seems rather distant of realization in this country.

Teachers will now refer with interest to the following portions: 1, of the lately issued Syllabuses of the "Preliminary" and "Certificate" Examinations of the Board of Education which referred to Drawing; 2, to extracts from the recent "Memorandum" of the Scotch Education Department on the Teaching of Drawing, given below. The first may at any moment be partly or wholly withdrawn, yet both coincide.

I. TYPICAL BOARD OF EDUCATION EXAMINATION SYLLABUSES IN DRAWING

Preliminary Examination for Elementary School Teachers' Certificate

DRAWING:—

Candidates will be required to undergo a test in either (1) or (2) below, whichever may be chosen in each case by the Examiner.

(1) Drawing from Natural Objects.

Candidates are required to make a drawing on a half imperial sheet of paper from a natural object. The drawing may be made with any materials, and should be as complete as the candidate is able to make it. No ruling, measuring, tracing, or other mechanical aid whatever is allowed.

Candidates should have gone through a graduated series of exercises in drawing from plants, foliage, flowers, and other natural objects, for the purpose of acquiring (a) a general knowledge of organic form, and a knowledge of the form, structure, colour, and other characteristics of natural objects from direct study of them, together with an appreciation of their beauty, and (b) the power of drawing freely and accurately from objects, memory, and knowledge.

(2) Drawing from Hand-made and Artificial Objects.

Candidates are required to draw on a half imperial sheet of paper, tinted or otherwise, the objects placed before them as they appear from the point of view at which the candidate may be seated. The drawing may be made with any materials, and should be as complete as the candidate is able to make it. No ruling, measuring, or other mechanical aid whatever is allowed. For the examination a simple object, resting or suspended, or a group of objects, will be given.

Candidates should have gone through a graduated series of exercises in drawing from common things of simple form, for the purpose (a) of acquiring by direct study of objects a general knowledge of form, and a knowledge of the form, structure, and other characteristics of such things, as well as of the effect of perspective in modifying their appearance, and (b) of representing them accurately and intelligently, not only while the objects are in sight, but also from memory and knowledge.

The exercises should not be restricted to mere outline drawing in pencil on white paper. A wider range of study is suggested by the use of brown or tinted paper, charcoal, crayon, pen, brush, &c.

GENERAL PRINCIPLES

Certificate Examination for Teachers in Elementary Schools



DRAWING:—

1. Drawing on the blackboard. The tests in this subject may include—

- i. Memory drawing of a simple object shown to the candidates for a short time before executing the drawing.
- ii. A drawing from natural or artificial objects selected by the Inspector and placed before the candidates.

White or coloured chalk may be used for these exercises, but only white chalk will be provided at the examination. Candidates who wish to use coloured chalk must provide their own materials.

2. Drawing on paper. Each candidate will be expected to draw on a half imperial sheet of paper, tinted or otherwise, (i.) a natural object, or (ii.) a hand-made or artificial object, resting or suspended, or a group of objects, placed before him, to be represented as seen from the point of view at which the candidate may be seated. The drawing may be made in any medium, and should be as complete as the candidate can make it.

3. A paper will be set to test (i.) the candidates' knowledge of the aims to be kept in view in the teaching of Drawing, and of the methods by which a teacher should try to realize those aims; and (ii.) their ability to illustrate not only lessons in Drawing, but also lessons in knowledge of the common facts of the external world, and in other subjects taught in public Elementary Schools by means of drawing.

4. Students should come provided with water-colours (not dyes), brushes, water-bottle, and dipper, pencils, chalks, &c., and also drawing-boards and drawing-pins.

II. EXTRACTS FROM SCOTCH MEMORANDUM

NATURAL AND COMMON OBJECTS.—"The careful study and more or less complete representation of actual objects, natural and fashioned, large and small, singly and in well arranged groups, may be looked upon as the foundation of all primary school drawing instruction. The intelligent arrangement and carrying on of this work, and of the various correlations and developments which naturally arise from it at all points, are problems which have to be faced by the majority of primary school teachers."

OBSERVATION.—"From the very beginning the child should be encouraged to observe on his own account, and to record the results of his observations with as much accuracy as he is capable of. Nothing should ever be interposed between him and what he is representing."

PRELIMINARY EXERCISES.—"Some good practice may be obtained, especially in the younger classes, from the free and

rapid drawing, to a large scale, of such simple, well-known forms as the circle, ellipse, loop, and others, mainly with a view to gaining facility, freedom of action, and a command of the medium employed."

CLAY MODELLING.—"Such manipulative training and intimate knowledge of form as can be very readily obtained from a sound course of modelling in clay will be found a factor of great value in the child's mental and manual development, wherever such work can be introduced as an integral part of the drawing instruction.

"The principles already set forth will, of necessity, be applied equally to the instructions in clay modelling, which should have for its objective the acquirement of manipulative skill and knowledge of form, mainly through the study and representation of actual things in the round and in relief. The work should be commenced and carried on alongside of the drawing instruction, with which it should be closely correlated throughout.

"In the primary school, clay modelling is usually classed among the manual occupations, of which, by reason of the knowledge of form and manipulative skill gained, it is perhaps the first and best."

PENCIL AND BRUSH.—"The pencil and brush, which may be taken as the typical examples of hard and soft points respectively, should be introduced as soon as the scholars show a reasonable amount of facility in handling chalk and crayons. Work with these instruments will be done mainly to a smaller scale than formerly, and the transition from the larger to the smaller scale may be very conveniently made by giving a number of exercises with school crayons on sheets of white, brown, or tinted paper, previous to commencing the use of the pencil or brush."

OUTLINE.—"The practice of confining the use of the pencil to outline drawing is not favourable either to the rational development of the work or the mental training of the pupil. For him an outline drawing is a convention so universal that he is bound to accept it, but as a rendering of actuality it is thin, meagre, and unsatisfying. While conventional or dictated shading should at all times be avoided, the pupil should be encouraged to represent the general effects of light and shade as soon as he is capable of seeing and rendering them. Indeed it should be easier for him to perceive a tone which is there than an outline which is not."

ACCURACY.—"The fact that a drawing is to be expressed in tone or in colour should be a reason for all the greater faithfulness in drawing, and not an excuse for inaccurate work."

SUITABLE LIGHTING.—"Whether an example from nature, a single object, or a group is being represented, some simple arrangement should be made for placing it in front of a suitable background, and for lighting it appropriately."

WATER-COLOUR AND BRUSHWORK.—"The introduction of the water-colour brush at an early stage will permit of some useful lessons on colour being given to the younger children. The primary colours, the mixing of these to obtain the secondaries, and again the tertiaries, the production of different shades, and the matching of colours, will afford a valuable

course of lessons capable of being carried out in an eminently practical fashion if each child is in possession of a simple colour box containing the three primary colours, or has a little of each colour given out. Besides affording scope for the children's delight in colour, these lessons will provide excellent practice in brush manipulation, and the pupils can soon proceed to the observation and rendering of the actual colours of simple objects, natural and fashioned."

WASHES.—"The application of a flat wash of colour to a preliminary outline studied from some simple subject such as a leaf, a coloured envelope, or a flag will afford a suitable introduction to this form of representation. More accurate renderings of colour variation and the play of light and shade will naturally follow at a later stage when the pupils have acquired the power to see and represent these.

COLOURED CRAYONS AND PASTELS.—"Now that boxes of school crayons, of reasonably good quality and with a fairly extended range of colours, are readily obtainable, very good exercises in tone and colour representation on white or tinted paper can be carried out in this medium. The simplicity with which it can be manipulated is greatly in its favour, and when the subject is well chosen for colour, and placed in front of a suitable background, a close approximation to the truth can be obtained. The use of this medium thus affords an alternative method of introducing colour representation which may be found very serviceable in many schools, especially those where the junior classes are large. The mental discipline is of course of an entirely different nature from that involved in the use of water-colours, to which it may be made the introduction."

CLASSIFICATION AND GRADATION OF OBJECTS.—"The subjects to be studied and represented may be classed generally under two heads—objects from nature and fashioned articles. A judicious balance should be maintained between these two. The examples selected from each should be graded to the capacities of the different classes and scholars. In addition, they should be arranged to follow each other in some ordered sequence, so that the intellectual side of the instruction may be fully maintained. Much should be left to the individual teacher, even in the larger schools, but it should be the particular care of the headmaster, or of someone specially responsible for the drawing instruction, to see that the whole of this work is organized and carried out in a thoroughly homogeneous and logical manner."

TYPES OF GRADUATED MODELS AND OBJECTS.—"The drawing of rigid objects thus forms an excellent complement to nature drawing, where many of the subjects are liable to constant change, and from their very nature demand a freer and more sympathetic treatment.

"The objects should be carefully graded to the capacities of the different classes, and so arranged that the difficulties are met and conquered one by one. For the youngest classes large objects flat in form or nearly so should be selected, in order to minimize the perspective difficulty. A boy's kite, a school banner, a painter's palette, and a Japanese fan

may be taken as typical examples of this class of object. Smaller objects of simple design, such as a door key, one or more dominoes, a safety-pin, or paper knife, should be used for individual representation. Many interesting articles might be brought by the pupils from their own homes.

"Solid objects of cylindrical, conical, rectangular, and other forms, very simple at first and never too complex, should be gradually introduced as soon as the pupils are able to cope with them. In setting groups of objects, incongruities of selection or arrangement should be avoided. The positions of objects relative to the eye level should be suitably varied from time to time. Objects such as a dovecot, an electric-light pendant, a swinging sign, or a hanging lantern should always be represented in their natural positions above the eye level. Similarly, objects whose natural positions are below the level of the eye should be so placed for purposes of representation. A sufficient number of objects or groups to allow of every pupil having a satisfactory view from within a reasonable distance should always be set up. The necessity for a background in all cases where tone drawings, either in black-and-white or in colour, are being made, should be strongly insisted on. In some of the higher classes draperies can be introduced for backgrounds."

It will be seen that the foregoing extracts deal very pointedly and concisely with all branches of the work to which they refer; and as they cover non-contentious ground, and are of universal acceptance at the present day, they have been quoted very fully as a good guide to the official presentation and interpretation of modern methods, and the ways of dealing with these subjects in primary schools.

II.—CLASSIFICATION OF DRAWING

Broadly speaking, all school drawing falls under four main heads:—

I. FREE DRAWING—in all media—from whatever may be presented to copy: nature, objects, photographs, museum specimens, ornament, works of art, design, pictorial representation.

The old distinctions between Freehand and Model are now entirely swept away as meaningless, for everything presented becomes the model, and every way of doing it should constitute “free” drawing, whether by chalk, brush, pencil or pen, &c.

II. MECHANICAL DRAWING.—All drawing with the aid of instruments, either of a purely ornamental description (including geometrical drawing) or of a technical character, from actual objects (preparatory to Manual Training), and leading later on to Machine and Building Construction. Included as a sub-section would be Printing, Lettering and Calligraphy.

III. MEMORY DRAWING.—Instantaneous in character, and consisting of short but regular practices taken, if possible, each week in conjunction with one or other of the drawing lessons proper, and occupying from ten to fifteen minutes, and immediately after viewing the object or specimen presented. This should be of a *simple* everyday character and not previously practised, at least in that particular position, *e.g.* a screw, a tuning-fork, stick of chalk or sealing-wax, purse, locket, &c. Objects of increased difficulty may be practised at longer intervals. Later, observations made from the microscope or lantern slides should be so recorded.

IV. ILLUSTRATIVE OR RECREATIVE DRAWING is of the utmost importance, but it is a general application of drawing, and therefore not specifically dealt with here.

It will be noticed that the following plates provide numerous suggestions in each of the above classifications, Mechanical Drawing beginning with Standard II.

III.—TECHNICAL POINTS

Since several vehicles of expression are nowadays advocated in order to familiarize the scholar with form, colour, light and shade, it is necessary for the teacher to be conversant with the use of coloured chalk, crayon, charcoal, water-colour, pencil, pen, and clay or plasticine.

Before going into these it will be convenient to touch on a few general points.

For instance, the question of the teacher's qualifications.

All teachers should consider themselves competent to teach Drawing, though not everyone obtains the right training and qualifications to teach it as it should be taught. The proof of ability lies in the fact that all infant teachers are of necessity compelled to attain to a degree of facility in the subject in order to carry out their ordinary duties. Teachers of *all* grades should therefore, with practice, be able sufficiently to familiarize themselves to carry out the required criticism and demonstrations in their own classes. A good art class or teachers' preparation class is the best means of improving in skill and method. Failing that, self-instruction, and advice such as is given in this treatise, should be sufficient to supply the defect and improve one's ability. Under this new system of object drawing, however it is imperative that the teacher should be able to display or group objects to the best advantage before the class, and to minimize all difficulties, securing the interest of the class by employing interesting or attractive objects as far as may be, and linking these up with cognate subjects whenever possible.

MATERIALS AND APPARATUS

All objects used for collective teaching should be properly displayed. This may be done by pinning them or otherwise attaching them to the blackboard, or resting them on

the mantelpiece or on shelves. There are also on the market "standards", furnished with a sliding bracket-shelf (up and down), which are most serviceable. Then for larger groups, requiring good lighting, the ordinary school-of-art three-sided box (two sides at right angles and a cross top side or bottom) is not to be improved upon. It would rest on tables or chairs. Of course light bamboo screens of American cloth could perhaps be made on the school premises at little cost or trouble. Lastly, for displaying certain natural objects, flowers and sprays, in a free standing position, nothing is more effective than to use a small piece of moist clay and stick the stalk, &c., into it, which keeps it firmly in position. A piece of wire or washing line can be carried across the room, from which to suspend certain objects that require it. Objects require light or dark backgrounds (blackboard or paper) to show them off properly.

In a word, the proper arrangement and pleasing grouping of objects in the most advantageous manner possible, the adjustment of pieces of drapery or coloured materials as backgrounds, and the composition of line and harmony of colouring in the groups set up, constitute the main problems to be mastered by the teacher in private study and preparation. It is just in this particular that expert help and guidance either at an art class or from the visits of a specialist become most helpful, and should be sought for by everyone anxious to improve his grasp of the subject. Then the disadvantages of lighting and other adverse classroom conditions will be the better met, and the question of awkward perspective views obviated by a proper insight into working difficulties.

Several educational firms are supplying good sets of objects, but each school can readily procure its own collection at a few shillings' cost by cheap purchases at shops and bazaars, and can always count on the scholars bringing what may be required from their homes, except in the very poorest schools.

Hence there need be no stereotyped sets of models employed in any one school, indeed the less stereotyped the better.

INDIARUBBERS should be used by all children (of whatever age) who use lead pencil for any drawing which is of more permanent character than mere sketching or recreative work. Only, the youngest children would use it at the sole discretion and under the direction of the teacher. It is pure pedantry to deny the use of the rubber—used properly, not abused. Wrong lines must be obliterated, careless lines redrawn, and the use of the rubber taught as a *tool* as much as the pencil is taught.

INKS.—For all advanced technical drawing, Indian ink should be used, preferably in liquid form. Pens must be kept clean. Ebony stain is sometimes employed. It flows nicely and is cheap.

Coloured inks and stains are of little real value except for some ornamental brush-stroke work. For real painting, real water-colour paint should be mixed and used by even the youngest scholars, for whom at first it will be necessary for the teacher to mix the preparation in sufficient quantity to be distributed round the class.

CHALK has three distinct uses, to which it is put simultaneously, in almost every drawing.

1. The whole flat side of the chalk for shadowing in the whole solid form or silhouette of the object, first lightly, then with the broad surfaces emphasized and modelled up.
2. The whole edge of the tip, for broad lines and narrow masses.
3. The extreme chisel-point for fine lines, outlines, and sharp touches. For instance, in a flowering plant the stalk would be put in with the point (of varying pressure and thickness) as a solid length and not in double outline, the flowers with broad point, the larger leaves with flat side, serrations and veins with the sharp point and in quick touches.

It will not be putting the chalk to its fullest and best uses if it be limited to the mere rendering of outlines. It is pre-eminently an easy medium for massing and colour effects (if kept within reasonable compass); and should an outline be first required (for large objects), then the colour may *afterwards* be added. If the object can be put in *direct* in mass—either by circular movement of the chalk outwards, from a centre nucleus, as in an apple, or by dragging the side of

the chalk point upwards and downwards, backwards and forwards, in lines and strips, as in parsnip or radish, bottle or envelope—let it be done that way. A preliminary outline is not then necessary.

BRUSH.—The brush is an ideal instrument for “massing” in its highest, most refined, and permanent form. As in the case of the chalk, its uses and possibilities must be demonstrated many times to the scholars. Its power of making a thin line; a long stroke of varying thickness as in a stalk; of irregular brush-impression as in leaves and petals; of solid circular form as in the grape, lemon, tomato, hips and haws, might well be demonstrated from nature *after a few preliminary* exercises in so called brush-manipulation to exhibit its possibilities. In large shapes a centre blob or nucleus is roughed in; then, with quick movement, first one side is added, then the other, and interstices filled up. Sharp high lights are left white or picked out with Chinese white, and the shadow side strengthened in tone while still wet. Lastly, its value in laying on washes, gradations, &c., as preliminary to further application in maps, ornamental shapes, and backgrounds, together with lessons on colour scales and colour harmony, should be recognized. “Camel hair” and, for older scholars, “sable” brushes are requisite. Nos. 5 and 6 and larger are generally recommended. Makers suggest they be stood in a jar, tips upward, after use and thorough cleansing.

One question arises on a point of manipulation, and it is this. In some schools that have gone in very thoroughly for Painting, they have discovered that instead of first lightly sketching in the more complicated or difficult objects in pencil or charcoal (to indicate position and general arrangement, though this is not necessary in simple isolated forms), the more ready plan is to very faintly shadow in with a *pale* wash of colour the general mass of the object, adding-on and altering, while the drawing is in this fluid state, until correct. Then, when dry, commencing to paint right away over this preliminary sketch with full brush and tone, to the true strength of the original.

On the whole there is no doubt that the direct rendering of natural specimens (and pressed

leaves are certainly an advantage here for beginners) and common objects of distinctive colours with the brush is infinitely more educational than mechanical patterning with brush strokes, though the latter should not be wholly neglected. Good modern wallpapers, including friezes, often make excellent copy practice. The brush should be held nearly at right angles to the paper, and when the latter is flat the working hand may be rested for support on the closed fist of the left hand.

PENCIL OR CONTE CRAYON.—The pencil or crayon is one of the finest and most natural instruments you can put into the hands of all but the youngest children, notwithstanding the shallow objections often put forward to the contrary. The pencil gives a *permanent* line, it gives a *graphic* line, and it leads up to the very highest forms of graphic expression—the pen, the etching tool, the lithographic point. It is capable of rendering infinite gradations of delicacy, and of giving the most subtle variations of touch power. It stands in the Western world for *graphic* expression (drawing and writing) as much as does the brush in China and Japan.

Besides—and this is the most important point of all—it is according to the child's own choice of means of expression. Children of two and a half and three have been known to ask, beg, for, "*pencil* and paper" to scribble upon. And the child's first expression is "line" and not "mass". It makes little ovals—ciphers or symbols—and calls them all kinds of things, from a hen to a man; or lines, and calls them pins and cotton; or other scribbles, and calls them letters. *We* teach it "massing" and the use of the chalk for colour and in order to quickly develop its power of representation. But "massing" was *our* invention, not the child's. It likes massing, when once it is shown how to do it, but from childhood to maturity, when left to itself, the child invariably uses the one direct convention that symbolizes for it all that it wishes to express, viz. "a line". The mass to the child is in reality an *outlined* mass.

This graphic power was conspicuously exemplified by primitive man in his bone scratchings, and down through all ages, through Egypt and Greece (pre-eminently), India, Persia, Celtic times, Medieval Europe, the Renaissance, to modern North American Redskins, Bushmen, and

barbaric tribes in general. Lastly, by Japan in common with all civilized countries it has been most freely employed, *i.e.* by all to whom expert draughtsmanship has meant "line" drawing in its widest, deepest sense.

Therefore, what the child asks for, ever delights in by its own natural instinct, and pursues to maturity, let it cultivate from the very beginning under our systems of teaching, viz. the means of *graphic* expression, that which is the life and soul of all *illustrative* drawing.

In *shading* objects with the pencil, the lines should not be scribbled but quickly and freely drawn with the rubbed-down blunt edge of a fairly soft point (B or BB) mainly in one direction, or in directions in accordance with contours; but avoid cross-hatching.

Mere flat massing with a pointed tool like the *pencil*, without an outline first lightly sketched in, is a poor imitation of chalk massing without its virtues, and is not legitimate. Young children cannot evolve anything worth the trouble from a dirty, nebulous *mess* of pencil scribble. Also pencil drawings should not be over-large in scale.

In all outline and shaded work the *side* of the point should at all times be used, and the pencil generally held at right angles to the direction of the line. If more convenient, the paper should be turned at any angle to achieve this, just as professional draughtsmen and black-and-white artists do. In shading, the pencil should be first rubbed down on a piece of waste paper, to get the proper broad flat edge. For outline a soft HB is best.

Above all things, "expression", quality, and character ("fatness" it is called) in the line used should be sought for; it is just as important as expression in music and singing. It is obtained by varying the pressure in order to secure emphasis where required, near edges being intensified, distant ones softened.

"Lining in" is not a separate process, and in nature-work is never employed, every touch being direct. It merely means the securing at last, if not at first, of the final, finished, and satisfactory line required, and can never mean the rubbing down and total relining of the whole drawing.

PEN.—Elder scholars should be encouraged to do all illustrative drawings to their written essays with this instrument. Specifically, in the drawing lesson the pen should be used for shading instead of the pencil in Standards VII and Ex-VII when opportunity offers. Or copies might be made, when obtainable, of good book-plates (by Walter Crane, Burne-Jones, Morris, and others), of head and tail pieces, &c. The most immediate use of the pen will be in printing (maps, scale-work) and lettering (Christmas cards, menu-cards, &c.), and the study and use of alphabets. A J pen or Waverley nib, with ordinary ink, will do much, but other makes, and chiefly a cut quill as suggested in the Board of Education Syllabus, will give finer results. Large, solid blacks can be filled in with the brush, and, for better work, Indian ink should certainly be employed.

CHARCOAL.—In the hands of more advanced scholars, charcoal and real “pastels” may be used most effectively on white or coloured paper. But they require fixing with “Fixatif”. For very special work, a few scholars might be allowed to work on Winsor and Newton’s “Charpas” paper, but it is a little extravagant to do so. The ordinary tinted papers are more than satisfactory as grounds. Charcoal is rightly reckoned a very difficult medium.

CLAY OR PLASTICINE.—So intimately is the production of solid form linked up with general drawing that clay modelling becomes on the one hand a manual-training subject, and on the other a distinct means of artistic expression. It is “massing” *par excellence*. The training of the sense of touch, and of seeing the object made, *from all sides*, makes the scholar conversant with all views, and with solidity and relief. Hence direct modelling of common and natural objects is good. But perhaps even more practical is the production of objects worked in conjunction with, or as the outcome of, *working drawings—mechanical drawings*. This leads to the *creation* or *invention* of forms, in contradistinction to the pure *imitation* of forms; in other words to the designing of forms, a strictly structural or conventional application of modelling. Now, since clay modelling had its foundation in architecture, pottery, and sculpture, some of the highest and purest forms of convention in art, it is evident that the best forms of

modelling will not ignore but acknowledge this architectural and structural origin; just as the stonemason, plasterer, woodcarver, pottery maker, and others engaged in industrial crafts are bound to do. Hence modelling should not be tied down solely to the realistic representation of natural specimens. Indeed, even the teachers of "Army Drawing" in our public schools are beginning to realize its utility for school cadets in connection with the planning of military operations, arrangement and representation in miniature of forts, trenches, and so on. But the making of incised or relief tiles, of pottery (by hand or on wheel), of architectural features and details, are among the very prime exercises in plastic art. Again, the uses of the potter's wheel can readily be studied firsthand in connection with those toy potter's wheels now on the market (see Gamage's Catalogue), or in the potter's shop, and in exhibitions. In a pottery district it is a distinct incentive to good work if a few samples of scholars' handmade tiles and pottery are sent to be baked and glazed. This side of the subject is strictly utilitarian, and has its industrial outlet in our home arts and crafts; witness, for instance, Mrs. G. F. Watts's successful experiment in the making of terra-cotta ware at Compton. Casting in plaster of Paris, firing and glazing of pottery, gesso and repoussé work, inevitably follow the proper treatment of clay modelling, and would be carried on in special centres or in advanced art classes.

IV.—GENERAL TOPICS

PICTURES, PRINTED EXAMPLES, AND CASTS.—Extreme caution should be shown before wholesale condemnation is meted out in regard to printed examples. Fortunately all charts of subjects *which should be drawn from actuality*, and not artificial representation, are becoming extinct. Yet it is a very one-sided view to consider that there is no drawing but from nature and objects, or that, according to some prevalent notions, it is a sin for children to copy a good picture, photograph, or historic example, or a good diagram which illustrates growth, radiation, &c.

So urgent have become the demands of trade and craft that some of our leading educational authorities are seriously considering how to make their drawing schemes meet the requirements of lithographers, metal workers, woodcarvers, cabinetmakers, printers, bookbinders, and others; finding that a knowledge of conventional ornament from the best sources and models is absolutely essential to the artisan—call it “mechanical” drawing, rather than “free” drawing, if you will. In a lesser degree than in the art schools, but still in some small measure, a little of such work is advisable in the primary school. Exact balance and knowledge of ornamental details cannot be ignored. Hence, with the swing of the pendulum, educational art experts in important centres are now actually at work selecting good photos or reproductions of industrial craftsmanship, destined to be used as copies by scholars at *intervals*, say, of every six weeks or two months, as practice in careful planning, symmetry, and good workmanship.

Large heraldic devices, illuminated initials, model sets of alphabets, photographs of historic works of art in our museums, of beautiful pottery, lustreware, woodcarving and panelling, metal work and grilles, leather work and bookbinding, tiles, jewellery, wallpaper and cretonne patterns, curtains, lace, and carpets, &c., are all worthy of reproduction. True ornament cannot be abstract, but real and applied. On the same plan, armoury and other accessories in pictures of historic character can be studied. Japanese prints are another source of inspiration. So are good book plates, and head and tail pieces.

Small hand photographs are perhaps the best. Good photographs, such as the Kerry "Oxford" Series, are useful for pure ornament; and, for recreation, picture postcards of the zoo animals provide some excellent studies. So do good Christmas cards, menu cards, posters, and calendars. There is no end to the list, and plaster casts come under the same category.

. It is a curious fact, worth attention, that children have frequently been known to ask for ordinary freehand conventional copies, in preference to all other kinds of drawing. They like symmetrical, rigid, regular form, and sometimes prefer to work in that way, if it is not forced upon them too often. We cannot therefore shut our eyes to these surprises. Perhaps it is that order, good form, and true draughtsmanship appeal to them. They like "perfect" curves.

OUTLINE DRAWING.—It is pitiful and amazing that there are found people who affect to despise "an outline" as being the antithesis of all good drawing! Ruskin preached the "no outline in nature" theory until he found it was unworkable and, like many theories, broke down in actual practice. His own beautiful outlines of architecture and of the Alps, sometimes filled in with colour, sometimes not, prove the fallacy of exaggerated assertion. We all *see* in mass, but we *draw* in line the limit or boundary of mass, as the foundation of all exactitude of representation. We cannot dispense with the convention, and much of the so-called massing of the present day, devoid as it is of background and settings, is an even greater convention. Let us be honest. Outline in its proper place is inevitable, as all the great masters of all ages have demonstrated—and it is the natural method. Leighton saw his pictures with the eye of the sculptor, yet he was a supreme master of outline, fastidious to a degree. Turner excelled as a draughtsman, hence his masterly treatment of architecture and landscape. You have but to study both his work and sketches to see how his pictures were built up on pencil and line, impressionist though he became. Watts and Whistler were equally clever and conscientious in the use of line, and the sketches of the Old Masters owe their priceless value to this very method. The ancient Egyptians and the modern Japanese may be described as masters of line, and the individual work of such men as Dürer, Flaxman, Alfred Stevens, Moody,

Walter Crane, Burne-Jones, Morris, Helleu, Hassall, Rackham, and a host of illustrators in all countries confirms this view of the importance of line. Rodin's drawings are supremely suggestive.

Hence we may console ourselves it cannot be all wrong to produce "line" drawing with the pencil when the form demands it and cannot be readily expressed by other means. Outline, emphatically, is a *means* to an end—the representation of solid form; yet, since it is produced first, it may be as far as the child is able to go, and therefore should be made as perfect and expressive as possible, shading or painting being added as time will allow. Outline work and technical drawing should therefore run along concurrently with chalk, brushwork, and claywork. Outlines preparatory to shading or painting will be very faint.

CONSTRUCTION, &c. — Analysis of form and construction, estimation of proportion, are great essentials; so are "construction lines" within reason; middle lines for vases and axes for ellipses, not always, but mostly. Knowledge of the laws of composition, symmetry, balance, growth, radiation, convergence in perspective, colour harmony, and others equally important should be impressed unconsciously at every opportunity, even upon the youngest children, amply illustrated from natural forms. There may be no *rules* in art but there are great *laws*, just as in music. And as for mechanical aids and construction, do not even artists square out for enlargements? Do they not also use the pencil for comparison of direction and proportion, and the plumb line for vertical points of comparison? Let us give the children the advantage of all reasonable aids, nor be so narrow as to prohibit testing with the pencil. Two phrases of the Scotch Memorandum put the case moderately: "All elaborate systems of construction lines should be avoided", and "The principles of perspective should be learned from observation rather than by rule". Indeed, if we were all clever enough to match the slope, curvature, and direction of every line as we really see them (as one would match colours), we might dispense with the theory of perspective altogether. In fact, perspective did not enter into art until quite a late period, some of the finest art being totally devoid of it. Straight lines can be tested by

covering them with the pencil and noticing the tilt or position of the pencil; curves can be tried by tracing over them in the air with the finger. Yet for scholars in Standard V (*i.e.* of ages eleven to twelve) and above, the simple laws of convergence in relation to the centre of vision and eye level are invaluable aids, simply grasped, of wonderful assistance, and should never be neglected. Of course children below Standard V should not be bothered with even this small dose. Hence a knowledge of ellipses and a little practice from the geometrical models may be at times very necessary. However, young children are, in this respect, very like the Egyptians of old, they grasp *form* readily but do not comprehend relativity of planes, and the foreshortening of perspective. And why should they? Could anything be more wonderful and realistic than those remarkable paintings of ancient Egypt? Therefore, if young scholars are to draw what they really see, objects must be so presented as to exhibit *form* only, and not involved perspective appearances. Mr. Walter Crane has truly said that model drawing in any other than this sense of the word is the very reverse of the natural method for very young children.

THE TEACHER.—Some years ago Infant Teachers taught drawing on the old squared system. Then came chalkwork, and with it freedom and the exploiting of the blackboard almost to excess. The teacher's facility on the blackboard, emulated and imitated by the children, was the salvation of Kindergarten drawing. But in the rebound it was discovered that the teacher was carrying things a little too far—the drawing from nature and objects really amounted to the exclusive copying of the teacher's representations of those objects more often than not. Then arose the critics and extremists, who forthwith began to condemn, root and branch, any blackboard drawing by the teacher in demonstration of the object, its appearance, its construction, or its details. "Leave all to the child. Let it discover all for itself. Interpose nothing. Let it evolve everything for itself; let it develop itself. Deal only with the *individual* by heuristic methods, sift the good from the poor, leave the former to themselves, and trust to repetition and observation only in the case of the latter, and let the remnant of hopelessly

incapable go uncared for—ignore them. The child's own impression is the only factor; all teachers' illustrations are therefore useless and meaningless, with the exception of demonstrations of the use of the tool. If the drawing is wrong it is because the child cannot see. Lines not seen should not be drawn; nothing should be put in which requires to be rubbed out afterwards. The child should draw what he sees; what he first draws should not be altered. Alterations should not be suggested by the teacher. If the drawing is altered at the teacher's suggestion the drawing is not the child's but the teacher's. The main object of drawing is to cultivate the observation. If a child can tell orally the proportions of an object, the reproduction of his ideas is of very secondary importance. The drawing must not be done piece by piece in the class; this is imitation, not drawing. Dictated drawing is useless."

And after such a whirl of platitudes the conscientious teacher feels that drawing must belong to some abnormal category of its own, and he had better relinquish altogether the task of trying to impart it. Such immoderate views tend to bring drawing into discredit. If the art teacher in the art school were to treat his students and their efforts in this bewildering manner, his class would empty after the first experiment. Or if the music teacher were to adopt similar theories, and glorify the child's self-expression on the piano, which would, of course, be "thumping", and *never interpose* or train in the five-finger exercise (however irksome), when would the child first begin to "express" itself with good effect in "sound", merely by "hearing" things played, but never being helped or corrected? The parallel could be drawn in drill, dancing, and other school subjects. "Leaving the child to itself", says one well-known authority, "leads to caricature."

However, the whole theory is a fallacy, based on a wrong assumption, which premises only that the child's impression is the one factor, and that his observation and powers of expression should be equal, or nearly so, to the vividness of that impression. A child speaks long before it writes a single letter, or formulates a fully coherent sentence. The child itself soon begins to know quite well how feeble are its own unaided efforts; and how many

adults can even correct errors which they know are wrong—*without aid*? No! the other great determining factor is the child's *inability* to express itself except in lisping, halting fashion, in other words, the very ineffectiveness of its motor activity. Therefore drawing is taught by just the same common-sense, matter-of-fact methods as any other subject of the curriculum; and teachers must use their own discretion in the matter. The individual child is not the "unit" the teacher of a class of sixty has to deal with, however much idealists may talk. The whole class is the corporate "unit" to which the heuristic methods are to be applied, and success in every lesson is largely a matter of drill, of discipline; and on this very account, ugly fact though it be, the less clever teacher of drawing who can maintain order, and keep his flock together in their efforts, will in all probability produce the best average work. Also, the weak scholars on this plan are *not ignored*, but tended and cared for, for it is they and not the clever ones who set the pace of the class. Even the worst, with time and patience, can be taught to draw fairly, as all can be taught to write passably. Nor does this mean drawing bit by bit, by word of command, military fashion: but it does mean the teacher asserting his right to get the best out of his scholars, by regulation of time, method, and procedure.

So the teacher, unperturbed by extremists, will not hesitate (when an object is not always accessible, such as a sheaf of wheat! a rainbow! a motor car! &c.) to put up a spirited sketch for the scholars, both to show how it is produced and for them to copy; and in other necessary ways demonstrate at all times and in every way, on the blackboard, *how* a thing should be done, just as the drill sergeant would do. The children love to watch it grow, and to do likewise. In fact, one of the leading professors of art in this country says that *demonstration* (including correction and assistance from the teacher) is the one feature which establishes the teacher's claim to his title; and he is surely right. In the words of one of the exponents of the Scotch Memorandum, the proper attitude to assume is to acknowledge that the drawing direct by the scholars from tangible things, and not abstract lines, "does not mean that the blackboard, so far at least as the drawing lessons are concerned, might as well be relegated

to the lumber room. The teacher may make good use of it for the illustration of workman like methods of procedure, for the explanation of principles or constructive details, for directing attention to errors common to the class, for all purposes, in short, where the instruction is more likely to be effective if expressed graphically than it would be if expressed verbally." Note that word *instruction*. Yes! there is deep, sound instruction to be given in drawing, as in all other subjects, if the child is to be *trained*, and the *teacher* is to do the training. The only point to be remembered is *that when children are working from actual specimens it is logically absurd for the teacher to make any preliminary drawing as a copy, when the object should itself be the sole copy*, and that at almost all times it is *absolutely necessary to give some preliminary instruction how to proceed, by a few explanatory sketches*. At the beginning of the year in the earliest lessons some further analysis of form carried to an advanced stage by the teacher (representing the object from his point of view) should be shown, and followed step by step by the scholars. The author went somewhat fully into this question in *Free-Arm and Industrial Drawing*. It indicates to the scholars the right method of construction to be adopted when they subsequently work independently of aid. In a word, the teacher should get the children *to think for themselves, find out for themselves, rely on themselves, analyse for themselves, and not work by rule*.

THE CHILD.—Mimicry, the power of imitation, is the chief factor which contributes to the child's development. This it is endowed with by nature to a marked degree; this enables it to develop as a human unit; this constitutes the *raison d'être* of teaching. One of its earliest infant cries in attempting to draw is: "Show me!" and the wise teacher will satisfy this craving, which remains all through life. The teacher is there to "show how", and by showing, *i.e.* demonstration, illustration, the child advances. The child's impression is necessarily vague and imperfect—though to a degree its observation be acute—only portions of things strike it, or attractive things, or things in motion. Its *expression* is even more imperfect, and at first almost non-existent. Impression is therefore *not* the *only* factor. The *lack of manual power of expression*,

i.e. of *motor-activity* or *executive power*, counts far more and is far greater; and it is this deficiency which has to be reckoned with and overcome, or all the observation in the world is useless. All unaided drawing by young children is known as "preconceived" or "memory" drawing, in contradistinction to "verisimilar" and "direct" drawing. In numberless ways, therefore, the teacher is bound to interpose between the object and the child—at all and every point in fact where difficulties arise, if it is to be a matter of real observation and not mere hazy impressionism. Then, after a while, the child will walk a little by himself, and then after a little the teacher may "let him go"; for the child soon begins to say: "Please let me do it all by myself". That is the teacher's golden opportunity. Says a practical teacher from over the water: "Crude as these early drawings are, they often show much life and action. At first these drawings are perfectly satisfactory to the child, but soon he becomes conscious of his limitations of power, and is ready and anxious to learn. *Here the teacher must help.* The children must not only learn how to see, but how to express." Every true teacher is impelled by a desire to assist the scholar, and the child looks up to his teacher for instruction; surely right instruction will not crush the child, kill its initiative and inventiveness, make it a weakling, but rather develop its strength; will, in fact, consist of the discussion of form, colour, uses and general appearance of the object, and the eliciting of what the child sees. Little will be directly told the scholar—he must investigate for himself; but guidance will come from the teacher, through intelligent cross-questioning of the class, leading to the right line of thought and action. In time, practice (tempered by judicious criticism) will tend to make perfect. A leading Art Master in this country has recently observed:

"I think we are nowadays too tender in our consciences about giving children a lead. Good examples may without hurt be followed; and it is mere cowardice in educationists to avoid all giving of examples, or of methods, or of ideas, for fear lest they may thereby influence the opening minds of their pupils. It is the teacher's duty, and it is that which makes his profession one of dignity and account, to give examples and methods, and yet to keep

the child's mind free . . . corrected and developed by observation of nature. It is this first-hand knowledge of nature which gives life to the work."

It is easy enough to set tests for the child to do things—draw—all by itself from its own observation. This should be done often; but it is not the whole of teaching. It is invariably those scholars who have been best taught, criticized, and helped who at the end of the term—under normal conditions—turn out the best results in tests; or who, during the term, on being set each week some simple subjects to draw at home (all by themselves), show the best evidence of their teaching by the intelligence which they display in their own individual and independent work. This has been proved over and over again. • •

"Observation" must therefore be *guided* by the teacher. The three faculties to be nurtured and fostered by the teacher are: (1) the *imitative* (including the observational); (2) the *imaginative*; (3) the *creative*: all of which children possess to a marked degree. You show the child how to step it in the dance, how to pitch its voice in song, how to use its hand to draw what it sees: its *imitative* power will readily pick this up from you and help it in its own progress. In *imaginative* exercises you leave it entirely to itself, in *creative* work it reconstructs on previous knowledge. *Memory* work will strengthen and rapidly improve its powers of observation, particularly if it study and observe tangible objects, things in motion, actuality; indeed, without a doubt, under such instruction it is bound to progress. The drawing of nature, and common objects, accustoms the child to associate drawing with practical everyday life; so much so that, on leaving school, or in their own homes, they begin spontaneously to apply it in a direct and natural manner to the representing of things around them. Their own innate interest and self-activity thus assert themselves.

V.—DESCRIPTIONS OF PLATES

GENERAL REMARKS.—These plates serve as a key to a complete and graduated course of instruction. They should, if possible, be used in conjunction with the plates in *Free-Arm and Industrial Drawing*, which refer to the work of the various standards. Those plates illustrated mediums and method, these supply the objects to be utilized as models. Reference to the English and Scotch Syllabuses at the beginning of this book, and to the “suggestions” on drawing issued by the Board of Education, will be found to supply, in sufficiently detailed manner, the requisite procedure in the various classes. Similar types of objects to those given may readily be found on all sides, in every way fully meeting all the teacher's requirements. A year's work is indicated for each class. They form, so to speak, an illustrated catalogue. The objects are not arranged, but shown photographically as in an assorted cupboard.

Points to be noted are:—

1. The objects and specimens are easily procurable, and could be brought by chosen scholars from their homes for the occasion. Indeed the scholars will enjoy co-operating with the teacher in procuring these things.
2. They are *large* enough for “classwork”, *one* or *two* specimens *serving for the whole class*. They can be placed on a ledge or shelf, or hung over the blackboard.
3. Suitably small objects or toys taken from the children's pockets and other sources, and placed on or against a white sheet on their desk, will serve as models for *individual* work. They are numberless, though some discrimination is wanted in their selection.
4. All the plates (with the exception of the mechanical work) show the proper effect and introduction of shades, cast shadows, markings, contrasting tones. The mode of suspension should always be shown in the drawing, whether by drawing-pins, string, tape, or other means.
5. All the objects would be suitable for instantaneous memory practice, also for “groupings” of objects. To “group” nicely requires some skill, taste, and a little practice.

6. All may be worked in chalk, pencil-point, paint, and clay or plasticine. White or coloured backgrounds may be employed, and must appear, whenever the children are capable of managing it, in the drawings.

7. All objects selected should be interesting or picturesque, and special value attached to attractive things such as toys, games, decorations (as used at Christmas time or on festive occasions), musical instruments, Japanese screens, umbrellas, fans, and lanterns. Even sticks can be arranged into geometrical patterns.

8. In these plates such objects have been presented as do not always fall into the usual category of tinware and hardware. . . .

9. Yet household and kitchen utensils, objects bought from penny or sixpenny bazaars, garden tools and instruments, furniture or portions of it, or groups of it, go-carts, cycles, golf clubs, pots, pans, elegant vases and bottles, objects seen in shop windows, all form the usual stock-in-trade of the teacher.

10. Lastly, things *in situ*—chimney-pots, parts of exteriors and interiors, skylines (mountains, trees, cliffs, roofs, or chimneystacks)—are all worthy of attempt in top classes, whenever visible. Colour, tone, light and shade, should always be indicated whenever the child can manage it, even if the black-lead pencil be the only medium employed.

COMMON OBJECTS

Having first sketched the article from the original, the scholar should be encouraged to make a small supplementary sketch showing how the object is used. For instance, young scholars who have drawn a peashooter could readily depict pictorially and graphically, in a little sketch, one of their colleagues gleefully operating it. This exercise might occupy the last ten minutes of the lesson. Gateways and steps sketched out-of-doors might afterwards have human figures introduced into or upon them.

PLATE I

Infants and Standard I.—The simple objects here shown afford good practice in the rendering of *lines* of all descriptions, of varying thicknesses and directions, preferably in chalk. Even with pencil, and in the case of a thickness as great as the walking-stick, the drawing should not at first be rendered as a *double* line but as a single *thick* one—in other words an extended and attenuated “mass”. Hence diabolo sticks (in various positions), bamboo sticks and canes of various lengths, bows and arrows and other things shown, exhibit a distinct contrast of lines of varying thickness. The first exercises might be taken with string and drawing-pins. The pins are placed in various positions (vertical, horizontal, and oblique) on the blackboard, and string stretched from one to another. Every conceivable straight line can then be practised this way; the child is not drawing *abstract lines*, but concrete things—pins and strings; for he will first draw his pins, then the string, and call them such. Loops and knots and bows can be practised in like manner for *curves*, using string, tape, ribbon, twisted wire, or cane. Varying thicknesses of line may be brought home very forcibly to the young mind by comparing and contrasting a length of rope or thick twine, a length of string, and a length of fine thread or cotton, *e.g.*:

Rope

String 

Cotton 

Always let the pins or means of suspension be shown in the drawing; it imparts naturalness.

Follow up these preliminary exercises with articles like the gridiron, bootlace, hoop, necklace of beads, or skipping-rope, which show line with small masses attached at points for handles, &c. Pieces of wire-netting also serve as a kind of line pattern-work.

Lastly, *tapering* lines—a great advance, because requiring more delicacy and sensitiveness of touch—should be insisted upon, as found in hatpins, knitting-needles, whips, skewers, &c.

Lines and larger masses are indicated by the clothes-line and articles on it (the rope being

easily strung up between two objects in the classroom), the horseshoe, fletcher-bull's-eye target, diabolo set, &c.

Arrangements of simple articles into little *devices* are indicated by the position of the hatpins, the bow and arrow and penny whistle. Crossed toy swords, tennis rackets, &c., may be employed this way. Of course different coloured chalks would be used at all times; *e.g.* the bull's-eye would be first rubbed in as a square white mass. Blue, red, and green chalk would give circles; brown or yellow the drawing-pins at the corners. Folded papers of all shapes supply geometrical forms.

Some teachers find a jointed "two-foot" rule—jointed at the 6"—excellent for illustrating lines at several angles, its sections can be so readily turned in various directions at the same moment. The angle-clock mentioned in connection with Mechanical Drawing may also be used.

Other articles which suggest themselves are: Toy flags from Christmas trees (in several positions); hanging pennons; paper hats and bonnets out of crackers (pinned flat against black-board); poker; peashooter; buttonhook; shoehorn; horseshoe magnet; toy boat; strips of lattice or trelliswork; anchor; fairy's wand; monkey-on-a-stick; toy lances crossed; fishing-rod; golf clubs; windmill-on-a-stick; bannerets arranged together; large square tickets arranged in geometrical order; line of music-box metal keys; singing charts; modulator or map (showing suspending string). The teacher cannot possibly make too much use of toys for young children in these lower classes. The doll's house and all its contents can be drawn and redrawn, purely in elevation of course; so also the Noah's ark; babies' belongings, such as feeding-bottles and rattles; soft fluffy balls; sets in rows, such as ninepins; toy plates on a shelf; toy tools hanging in a row; larger toys—models of boats, engines, lighthouses, signals; dolls dressed and undressed, Dutch dolls, dolls in costumes; cradles; models of rabbits, mice, and sheep-on-wheels; papers cut out to shape of pennons and flags, with circular or other perforations; lastly, ordinary objects like the toast fork, a jacket-holder, carpet whisk-brush, a mop, and a knifeboard

PLATE II

•

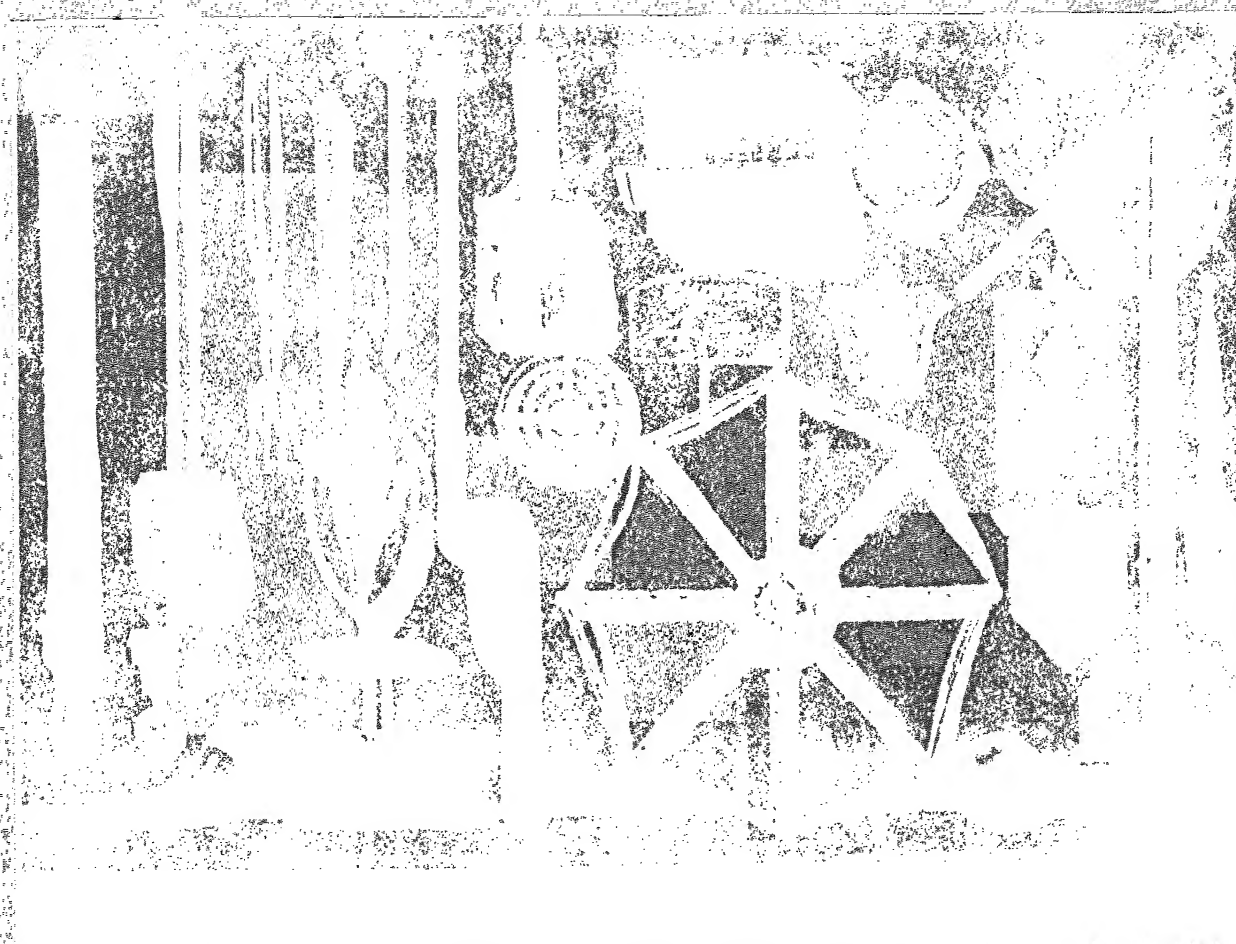
Infants and Standard II. The same idea is carried out in all these objects, only here we come definitely to simple *shapes* or areas, in some cases showing only flat surfaces, in others rounded as in the balloons, football, and ostrich egg. The children, when using chalk, can be made to give this modelled idea without much trouble—first rubbing the chalk on lightly and then concentrating on the high light, on the light side. Modelling may also be suggested in brushwork (it is not real light and shade) by adding extra colour, whilst wet, to the dark or shadow side, and lifting a little off with dry brush on the high light portion.

At this stage a wonderful amount of practice on the square, oblong, triangle, ellipse, and circle may be obtained by using large double sized sheets of foolscap paper cut to the various shapes and pinned up at different angles. The children will not call them triangles, for instance, but pieces of paper of such and such a shape. Let them show the pins or string, and tilt the papers at times. Differently coloured shapes might be superimposed, or the paper might be turned up or folded at the angles or edges. Again, a sheet of the shape of a flag or pennon, perforated with a simple figure cut out by scissors (after folding), e.g. the circle, triangle, or square, and showing the blackboard through, is readily manufactured before the class. The perforation then becomes an ornamental mass. Shield forms with corners turned over are equally good. Then follow tradesmen's window tickets, luggage labels, notice sheets, calendars, &c. Hockey sticks, bat, ball and wickets, cup and ball, are another classification; babies' shoes, mittens, gloves, jersey, hats, &c., are simple enough, shown flat. Garden tools and workmen's implements, such as hoe, scythe, or sickle, are sometimes handy; and suspended plates (by wire), ninepins, skittles, a mallet or a knifeboard increase the list; while practice in curves and ovals (ellipses) can be had from oval photo frames, mirrors, and mounts; a banjo; a teacosy; sieve; fives bat; toy helmets; and a life-belt. Circles may be practised from card board targets, or from an old cycle or go-cart wheel, a copper lid, hoops, suspended balls, &c.

PLATE III

Standard III. This plate calls for little comment. Area forms become more diversified; lines and masses are contrasted; fireworks and other playthings are in evidence, exemplifying radiation, spiral convolution, &c. The price should always be represented on the tradesmen's tickets. Mouthpipes, bagpipes, a Japanese one-stringed violin, are simple enough. Sieves and garden tools again come in; and for exemplifying the turnover of leaves like the aspidistra or palm, a large paper model can be cut out and turned over in various ways, the midrib being previously marked in strongly, with pencil. The great natural laws of *radiation* and *convolution* can well be shown from big shells; vine and hop tendrils; girls' curls; watch springs; catherine wheels; veins in leaves; growth of twigs and offshoot stems; and from the different and contrasting radial growths of various tree-branches, seen in winter. Generally speaking, shield forms; picture frame and cord; tiles and tile patterns; objects like tubes of paint in rows; bat, ball, and wicket sets; combs; hairpins and brooches; shuttlecocks and battledores; are all serviceable in this standard. Tambourines, cymbals, banjos, and triangles are of the right type of musical instrument for "massing" or for "line" work.

PLATE III



Standard III

PLATE IV

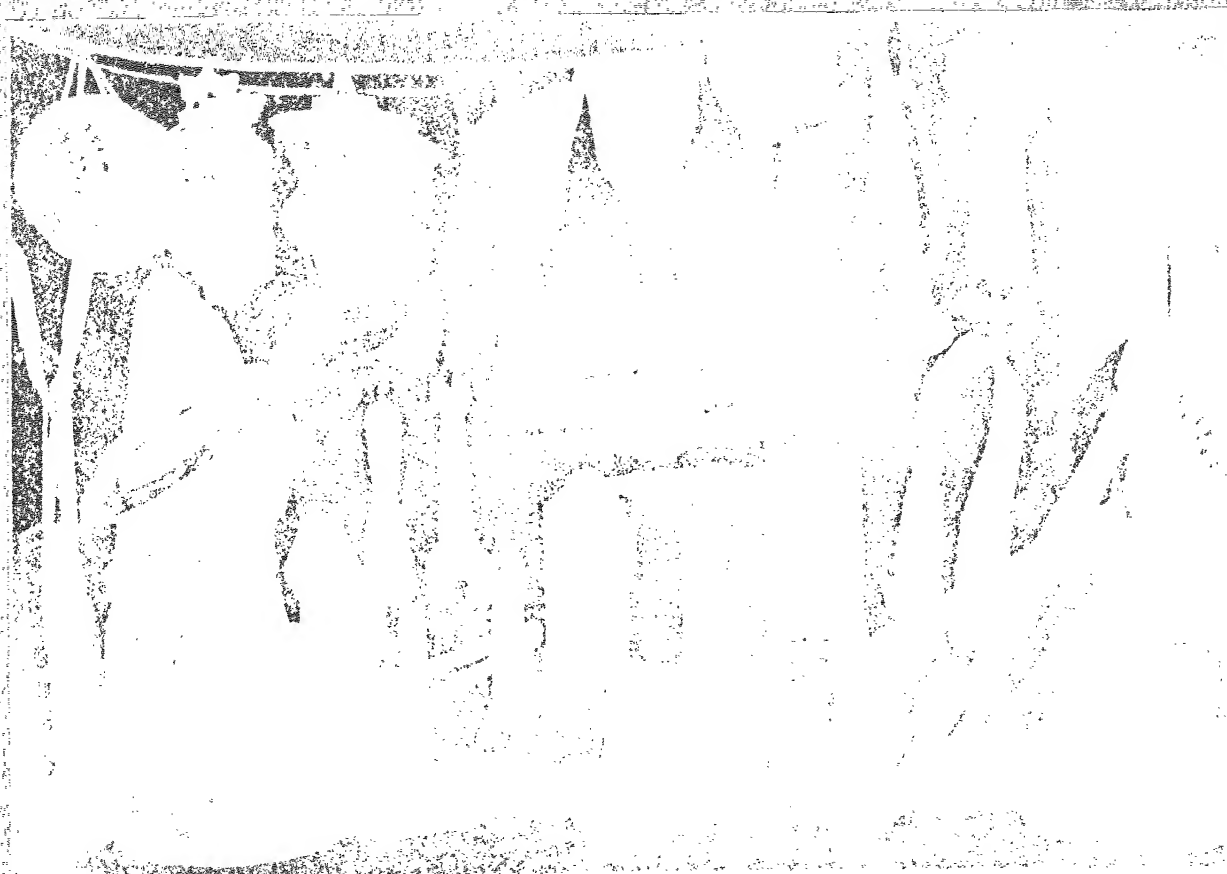
Standard IV.—Simple toys and instruments here again appear, only the objects should be suspended in *oblique* positions, as *e.g.* the teacher's **T** or set square, spades, fireirons, brooms, fishing or butterfly nets, satchels, cricket pads, &c. Other objects might be oil and vinegar cruet; feathers; alarm clock; gas bracket; electric bulb and shade; sugar basin; bag of sugar, of tea, of flour, or of apples; biscuit box; milk-can; belt and buckle; glass beakers and retorts, and globes, &c.; weights and measures; handbell; an open newspaper suspended; a horse's nosebag; and a bundle of chips. Foreshortened circles—the whole question of ellipses—might be dealt with fully in this class.

PLATE V

Standard V.—At this stage twisted and rolled paper gives splendid practice, both for the drawing of scrolls, and for practice in light and shade. Then glazed and hardware objects, with attention to high lights, the latter being carefully placed and kept brilliant by leaving them white with sharp edges. Glass retorts, bulbs, and tubes from the science apparatus will give the best practice in ellipses. Plaited baskets and flower pots might follow, as opaque circular objects showing elliptical appearances.

Besides those objects shown, others will strike the teacher, viz. the teacher's callipers; large pliers; pickle and jam jars with the paper caps on; boots and shoes; magic lantern; flower pot and pedestal; skates; hanging wire flower basket; a cruet or table centre; suspended dusters or drapery (against blackboard and from one or two points of suspension—unequalled as illustrating *radiation*); a child's hat, jacket, or other article of wearing apparel; jacket-holder; cricket pads; picture frames with picture suggested; details of furniture such as chair or table leg. Then carpenters' and gardeners' tools—fretsaws, planes, saws, shears; cycle wheels; gas bracket; electrolier; a frying-pan; toy letterbox; a money box; camera on tripod; gluepot; a shelf with a row of suspended kitchen utensils—spoons, ladles, &c.; a bunch of keys. Objects from the gymnasium, such as fencing-swords or sticks, Indian clubs, &c. The foreshortening of rectangular and other shapes, and the proper rendering of "spouts" and "handles", are the two important problems of this standard.

PLATE V



Standard V

PLATE VI

Standards VI and VII.—The ever-widening field (capable of infinite extension) gives us here a medley of objects which can be used singly or in groups. The old geometrical models (rectilinear and curved, spherical, conical, cylindrical) appear under the guise of the school globe, the box kite, basin, closed Japanese umbrella, toy drum, Noah's ark, paper parcel. Many others can be selected, such as books in piles and in all positions. The scholars should at all times be taught to look for the underlying form, and analyse all shapes for themselves, giving a written or verbal description if necessary. Cushions, hassocks, dorothea bags, metal pots, tankards, and pleasing and artistic vases are ideal models. Old armour; deer's antlers; top-hats; soldiers', sailors', and postmen's hats; manual-training tools—jack-plane and so on; toy swords and helmets; *tilted* flags and banners arranged in devices as on Empire Day, are all valuable for exercise. A trailing piece of drapery, and curtains, are really most practical subjects for study of folds and leading lines in drapery. Music and other stools, chairs (saddle-bag and others), small tables, music cases and stands, trestles and benches, open cupboard doors, chandeliers, &c., occur to everybody. Advanced musical instruments—zither, banjo, guitar, mandoline, concertina, harp, trombone, violin—are picturesque enough. Also the cases of same. Teapots, saucepans, frying-pans, kettles, &c., are prosaic but useful, especially in the rendering of handles and spouts, and little groups. Simple groups, as: Pudding-basin and eggs; wine bottle and pared oranges; grapes in bowl; cut loaf and bread-and-butter slice on a plate; a quarter of cheese; piece of bacon on hook; a ham or leg of mutton; gipsies cauldron; pair of scales; opera glasses and spectacles; a kodak on a stand; phonograph; air-pump; microscope; telescope; chemical experiments; model pulleys; windlass and other mechanical apparatus; an open paint box; cakes and pies; photo frames; clothes and towel horse; firescreens; &c., are all homely enough, and in every way suitable. Note always high lights and *reflected* lights.

PLATE VI



Standards VI-VII

Suspended brushes of all kinds, and boots in every conceivable position, should be attempted in this class.

Dolls and *toy* animals (rabbits, dogs, &c.) are entertaining and not too exacting, when intended only for an approximate representation of animal and human forms.

And if a real good bit of conventional freehand is wanted, two or three carpet-beaters of different pattern will bring out all the intelligence the pupil possesses.

Drapery studies of an elementary kind, as already mentioned, showing the patterns in the folds, are a highly useful exercise. The "Union Jack" and "dorothy bag" suggest some, or flags and pennons arranged as "trophies" on "Empire Day" as already mentioned; but an ordinary cluster hung casually from one or two points (by drawing-pins) on the blackboard, or trailed across it from one corner, gives a fine set of exercises in *lines of radiation* from points, and the appearance of *cross folds* and *pockets*. Bits of drapery could afterwards be used as backgrounds to simple groups of objects with considerable effect. Lastly, as an extended list, where they can be conveniently borrowed, the following subjects (chiefly with an idea to good perspective): Noah's ark, doll's house, toy windmill carefully drawn; magic lantern; looking-glass; saucepans; soapbox; kettles; piles of discs such as coins, draughtsmen, serviette rings, hassocks; pair of scales; bricklayer's hod; suspended doormat or rug; a rake; wheelbarrow; toy perambulator; boots and shoes; pestle and mortar; harp, concertina; top-hat; fish-basket or market-basket; wideawake hat; grandfather's clock; mousetrap; Japanese parasol closed or open; medicine and other bottles; candlesticks, cauldrons; screens, fireguards and clothes-horse; birdcages; dog's kennel; rabbit hutch; bench; easel; sundial; writing-desk; work bag or basket; model yachts, engines, trains, motor cars; chest of drawers; chairs; flagstones, bricks, &c., singly or grouped. In grouped objects much attention should be given both to the "massing" and the "spacing" of the objects.

PLATES VII AND VIII

NATURE FORMS AND SPECIMENS

Suitable for *all classes in all departments*. The same specimen might during a week do the whole round of the school, each class treating it according to its capacities and the medium employed—as an instance employ the vegetable marrow. More advanced objects are exhibited at the bottom of Plate VIII, and the animal form is dealt with from stuffed specimens (or actual specimens if butterflies, dragon-flies, beetles, frogs, newts, tortoises, &c.), and from toys in lieu of the higher animals which are so difficult to see or obtain. Toy animals—rabbits, cats, and so on—are sufficiently generalized, simplified, and stationary to obviate any serious difficulty. Big shells, such as the Trocas pearl, green snail, melon, scallop, pepper conch, pearl (white-ear), clam, pearl snail, and black helmets; fungi; seaweed; coral; sponges; peacock, ostrich, and pheasant feathers; branches; palms; reeds; grasses; buds; tubers; onions; radishes; maize; teasel; honesty; Cape-gooseberry; cow-parsley; ferns; thistles; catkins; shamrock; are of the best variety for study of form and colour. A broken-open cocoanut; suspended fish—eels, plaice, mackerel, starfish, bloaters, &c.; crabs and lobsters; oyster shells; opened and half-pared fruit; broken boulders or paving stones and brickbats piled and propped up like cromlechs; are surprisingly useful and effective. Celery and rhubarb sticks make good drawings.

The larger specimens on these plates are especially useful when plants, flowers, and individual specimens are not procurable in sufficient quantities for a whole class; or at certain times of the year. Vegetables are too much neglected.

And best of all—for naturalistic clay modelling, all such examples, especially vegetables, are of the very first order.

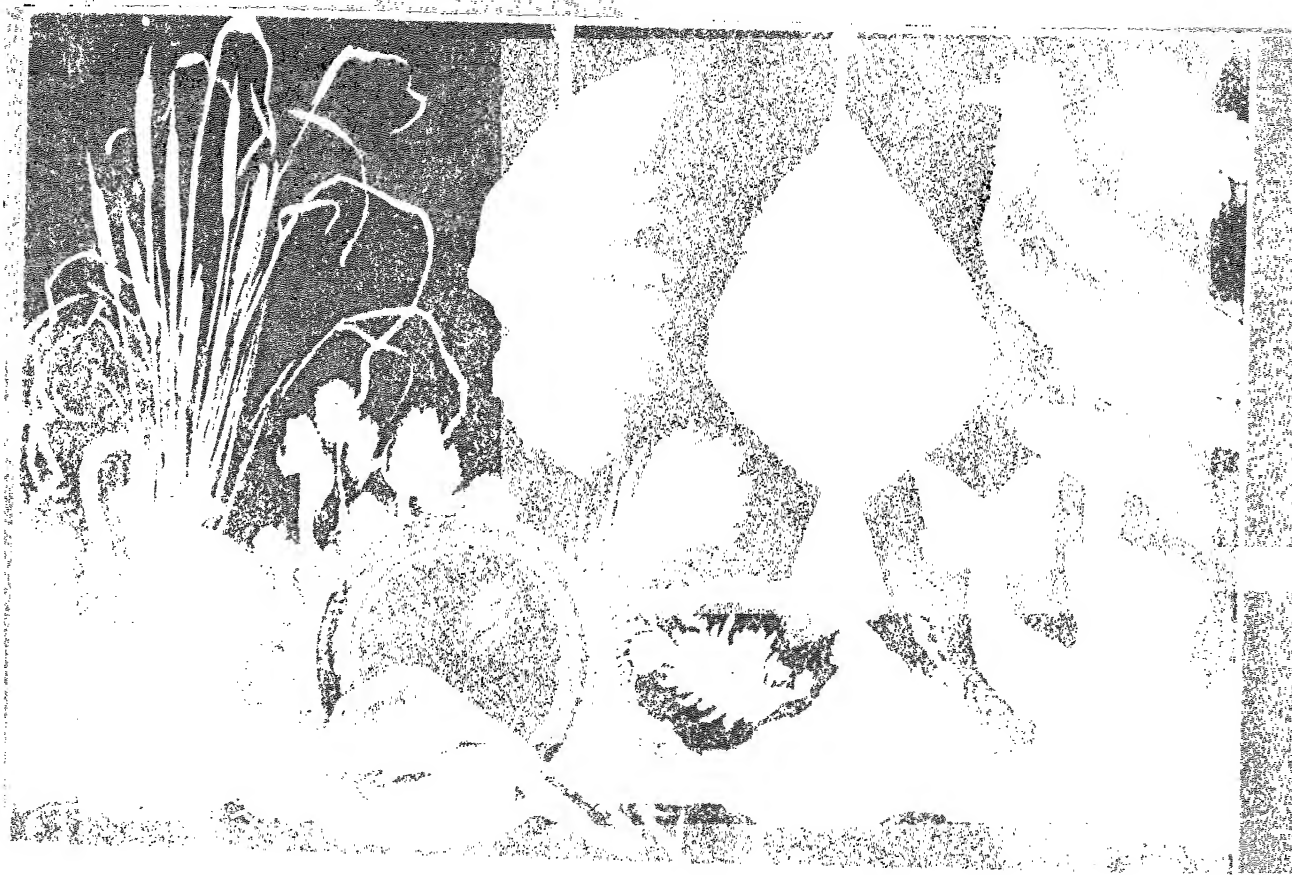
Not only should the specimens be studied singly, but in groups and in suspended positions. Objects allied to nature by manufacture, such as loaves, cakes, biscuits, cheeses, are good. Pressed

PLATE VII



All Classes

• **PLATE VIII**



Senior Classes and others

leaves and flowers for botanical exercises come in well. Sprays of blossom and bunches of mistletoe are beautiful and suggestive. Suggestive, too, are dolls in all kinds of foreign costume, and these are quite within the compass of the powers of scholars of all ages.

This brings us to the last connection in which objects of nature and everyday life may be employed. Many large objects can be procured by, or borrowed from, a forbearing schoolkeeper; or from the woodwork, laundry, or housewifery centres, such as dolly-tub and peg, barrels, dustbins, breadpans, zinc baths, trunks, portmanteaus, handboxes, ladders, steps, coal scuttles, boxes of all kinds, tables, chairs, camp stools, packages, trestles, &c. School furniture, such as easels and blackboards, standards for casts, &c., are always handy.

Finally, objects seen out-of-doors, where the school is in the country or near some local smithy and forge and farmyard, can be sketched *in situ* by parties of selected scholars, who are out for an "observational" or "nature-study" walk. Gymnastic contrivances in the playground, parks, or gymnasium are good. Drawings could be made, sometimes on the spot, sometimes from recollection, of parallel bars, horizontal bar, swing, giant stride, maypole, of finger-posts, notice boards, milestones, seesaws, tennis net, basket and ball (throwing), of grindstones, wheelbarrows, anchors, boats, carts, hayricks, sheds, beehives, rustic seats, summer-houses, fountains, windows, corners of buildings, farmhouses or cottages, church doors and windows, sacks of coal, fruit and vegetables in baskets, &c.

Thus also the general impressions might be recorded of visits to noted buildings; the parks; the docks; famous castles; the seaside; the waxworks; the railway; the circus; Santa Claus; &c., &c.

MECHANICAL OR TECHNICAL DRAWING

GENERAL REMARKS.—Since all drawing by the direct measurement of common objects must fall into the category of “scale” or “working drawing”, even from the earliest beginnings, it were well to follow out this particular branch through each of the classes of the senior school from Standard II upwards. Girls will not, however, go in for it so thoroughly as boys. It is perhaps the most practical of all kinds of drawing, and can be made most interesting and instructive. It has a strong utilitarian bias, hence goes by the name of “technical drawing”.

Points in the Scotch Memorandum on this subject are:

“Drawing to scale should invariably be done from actual measurements made by the pupils themselves.

“Two or three views of the object measured should, as a rule, be made—usually the front and side elevations and a plan—and these should always be placed in proper relation to each other on the paper, and showing the system of projection

“Scale drawing can be thus made to lead up to and include the elements of Solid Geometry. Curve plotting, and the use of lines and areas to represent various quantities to scale, naturally follow as a development of scale drawing. The educational value of all this work is very great, and every endeavour should be made to carry it out faithfully.”

The following Plates, IX to XII, are very important, showing, on the one hand, how simple the introductory exercises in the lower part of the school may be made, and on the other, into what varied directions the subject opens out. Also many things may, with scissors and paper, be cut out in the lowest classes (*i.e.* by children not under seven) and made up into little paper models of baskets, windmills, chaplets, &c.; succeeded by cardboard cutting in the

higher classes, *e.g.* Christmas cards; toy houses and buildings for a toy village. Lastly, ornamental paper units may be arranged into colour patterns. Of course, for older scholars, clay, wood, metal, linen, and such mediums are the higher and better forms of material in which the drawings should ultimately be carried out, but it is by no means necessary to always carry out a drawing. It is equally good, and sometimes better, to make drawings of a good object already carried out, as shown in these plates.

The plates themselves are sufficiently self-explanatory. HB pencils should be used, sharpened to a chisel point and kept in condition by sandpaper.

PLATES IX AND X

DIRECT MEASUREMENT FROM COMMON OBJECTS

Standard II.—The first procedure is to get the class to learn how to actually measure off lengths, say, of string or wire (knotted at distances, or folded), or pieces of tape measured and cut off with scissors to required lengths; spent matches, pencils, nails, &c. Then actual lines ruled on the paper to these lengths, and the piece of string or tape placed on the line to test whether correct. Lengths of coloured paper would do as well as the ribbon. Then bars of music could be measured and the length transferred from ruler to the paper; or pencils, nails, knitting needles and other long things would serve equally well. At first do not bother about the number of inches, it is purely correspondence in size and length or space that is wanted.

When the scholars are sufficiently familiar with the process, they are then ready to measure off areas *to exact size*—selecting, of course, small objects like postcards, Christmas cards, menu or dance cards, luggage labels, tram and bus tickets—things which they can see and *handle*. They would merely measure the edges, marking off lengths on a ruler, or slip of paper, with-

DIRECT MEASUREMENT FROM COMMON OBJECTS

ST. II. Early exercises: measurement of lengths and spaces (planes) to exact size.

String

$10'' (5 + 5)$

$6'' (2 + 2 + 2)$

$16'' (4 + 4 + 4 + 4)$

$5''$

Ribbon or Tape

$3\frac{1}{4}''$ $1\frac{1}{4}''$

$4\frac{1}{2}''$

$3\frac{1}{2}''$ $2\frac{1}{2}''$ $2\frac{1}{2}''$

Dance Winner

From To To Sweet Yours James - 1910

1932

$4''$

Folded Coloured Paper

Diagonal $5\frac{1}{2}''$

POST CARD

Master Carter
9 Fenwick Rd.
Dorchester

$5\frac{1}{2}''$

$1\frac{1}{2}''$

1932

Tram or
Cigarette
Tickets

To half or quarter size.

$2\frac{3}{4}''$

Fresh
9d Fish

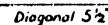
SIGN

8''

Toy 'Cracker' Hats

ST. II. Early exercises: measurement of lengths and spaces (planes) to exact size.

ST. II. Early exercises: measurement of lengths and spaces (planes) to exact size.



To half or quarter size.

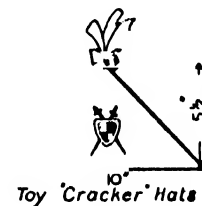
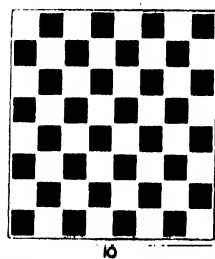
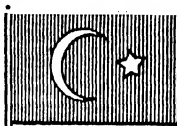
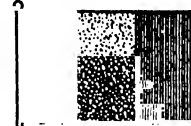


PLATE X

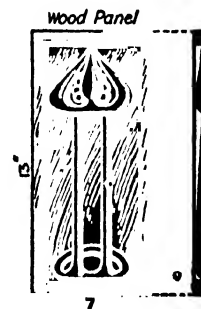
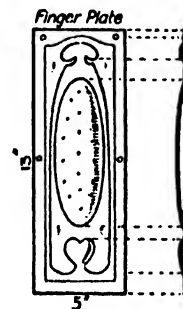
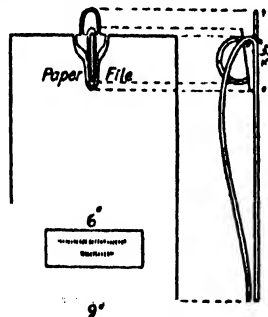
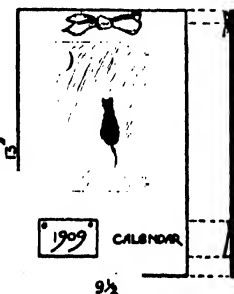
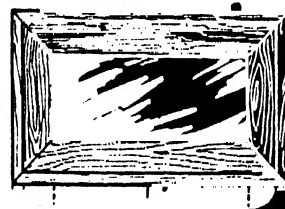
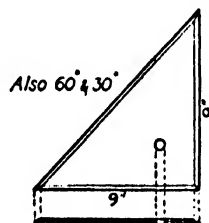
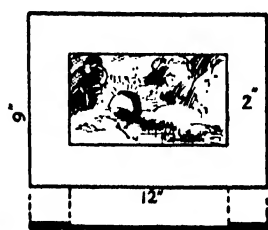
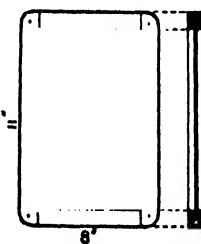
To half or quarter size (contd)



16



ST. III. Measurement of Areas (planes), with the addition of simple sections (projections); to actual or reduced scale



out worrying about the exact number of inches or half-inches at first; then transfer these sizes to paper. The object could afterwards be placed over the drawing to test whether correct. Errors will then be readily apparent. Folded paper, superimposed paper of various shapes, small and large envelopes of all varieties, give plenty of practice—measured by one or more scholars—but mere abstract *drawings* on the blackboard should, as far as possible, be avoided.

Next would follow shapes or areas to *half* and lastly to *quarter* size, but nothing below that. Trade “tickets”, “cracker hats”, are types of this class which will do. Or flags of different nations (shaded or tinted as shown) to reduced size, taken from toy flags (or models made by senior scholars), would give a good series. The International Signal Code might be taken as another. Of course the reverse process of “enlargements” may be dealt with. Objects of length, of a more difficult description, could be measured and calculated out in feet and inches, *e.g.* cricket stumps, hockey-sticks, stair rods, hoop stick, walking-stick, teacher’s pointer, map pole, photo mounts and frames, tiles, finger and door or name plates. All these would necessarily be diminished in size.

Standard III.—Objects of simple area are still adhered to, but the advance here is in the addition of the *thin side view* (projection, section, or thickness). Children should get accustomed to look all round an object, describe its angles, and see all its sides, in this work. Even flat objects have *thickness*.

A word may now be said on *geometrical designing*. Although quite another branch of mechanical drawing, it is surprising what clever and intricate designs with the ruler and compasses will be made by scholars if left to themselves, and many boys love doing it. This side of the question, if indulged in, ultimately resolves itself into coloured work—tile patterns, parquetry, &c. Coloured units cut by the scholars and arranged into original devices are good in this connection. Interlacing patterns, borders, &c., are admirable.

A little *real design* or *space decoration* might, on the other hand, be introduced into the drawing of book covers, Christmas cards, commemoration and celebration cards—and of the

right kind, if three simple working rules are kept in mind. The decoration may consist of the very simplest possible unit applied to the surface, as, for example, a postage stamp to the corner of a postcard; anything elaborate is not wanted. A few strokes or markings of the brush, properly placed, or a letter or monogram, give true decoration. The following rules are only broad working guides:—

1. Decoration confined to the corners of a panel, leaving middle space clear, gives good results.
2. Decorative tablets and shapes or borders, which in themselves repeat the outline of the shape (known as parallelism) in which they are inserted, are always satisfactory, even if they consist only of an isolated shield or panel in the middle of the space. Space is perhaps more important than design.
3. Decoration is always safely placed in those parts or spots where there appears to be constructive weakness, or where the surface or contour changes suddenly from one direction to another, as between the neck and shoulder of a vase.

A glance at the Christmas cards, signboard, exercise book, toy hat, slate corners, frame corners, picture, calendar, paper file, finger plate, and wood panel depicted here will suffice to show how these rules have been exemplified in their baldest and simplest form. But space will not permit us to go farther into this interesting matter, although it is well known that good planning, geometric tracery, plaiding, and panelling lie at the foundation of all good design, and are easily within the compass of the young child's capacity, if good examples, say by photography or other means, can be presented to him. He may make in brown paper, and decorate with brushwork or lettering, his own portfolios, notebooks, and essay records, &c.

.

PLATE XI

MECHANICAL DRAWINGS (*Continued*)

Standard IV.—Objects of three or more dimensions, requiring plans and elevations, are here continued. The use of compasses, protractors, and paper scales should be learnt. Here the “angle-clock” comes in useful. It is a rough dial with movable hands giving the chief degrees, and is easily made. The objects are of an everyday description, and, like the “toy cannon” (quickfirer) and “Noah’s ark”, appeal to the scholars. It will be noticed that the scale, though slightly more involved, is simple enough. Further toys, such as model engines, ships, signals, cranes, pulleys, cogs, capstan, pump, windlass, steamer, could be measured up in a similar fashion; and ordinary match boxes, chocolate boxes, and incandescent mantle boxes treated in like manner, then cut out of paper or card, and made up. The elements of Solid Geometry are helpful in this connection.

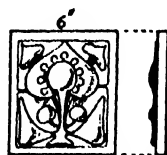
Again, in the case of boys, as an alternative, some preliminary exercises in the rendering of joints and tenons, &c., connected with the woodwork class, might be attempted, as in the “dovetailing” example shown. From the rough perspective drawing make a plan and elevation. Again, from the plan and elevation show an isometric projection.

Indeed, head teachers have found out that to obtain the co-operation of the woodwork instructor in planning out their scheme is to secure the best and most satisfactorily graduated co-ordination possible.

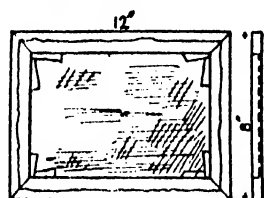
A pleasing diversion at this stage is the enlarging or copying of fine decorative initial letters from illuminated manuscripts, such as the P shown; or the designing of monograms for application to fancy needlework, stencilling, or in other ways. In this connection the freehand drawing of good heraldic devices is always good practice—the time is never wasted.

MECHANICAL AND OTHER WORKING-DRAWINGS CONTINUED

ST. IV. Solid Objects requiring two or more views (plans, elevations, & sections.)



Tile
Scale $\frac{1}{8} = 1"$



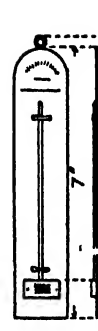
Canvas



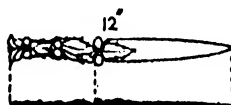
Mus. Box



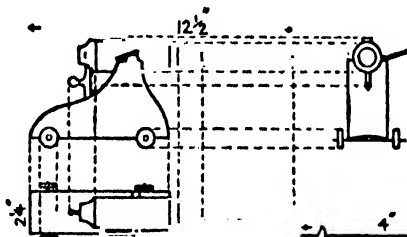
Cardbd Box
Scale $\frac{1}{4} = 1"$



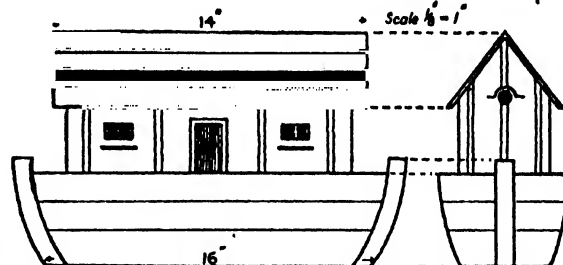
Rolling Pin



Paper Knife



Toy Cannon
Scale $\frac{1}{8} = 1"$

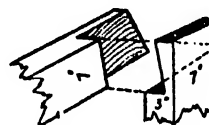


Noah's Ark

Initials
Monograms, Ciphers



Initial 1450



End Halving
Dovetail
(Wood-Work)

PLATE XII

Standards V-VII.—At this advanced stage the real articles should be carried out, in various materials, as a Manual Training exercise, whenever there is the least possibility of doing so; whether in cardboard, leather, metal, repoussé, wood, linen and needlework, straw-plaiting, or clay and plaster. It would be well for the teacher, where qualified, to select some one particular branch of technical work and adhere to that throughout the year. For instance, simple tile and pottery work in clay or plasticine, and drawn as well as modelled, is an excellent line. Clay models could even be baked, or cast in plaster if there be no undercutting. Some suggested types of other things are here shown, and further practice would be the making of sweetboxes, match boxes, flower-pot cover, window box, pea trays, penholders, hat, pipe and brush holders, date racks, watch stands, cigar boxes, mats, candlesticks, sconces, flower stands, and lamp shades and brackets of all kinds. Admittedly, this is elementary "technical" training, and could only be carried out under favourable and exceptional conditions.

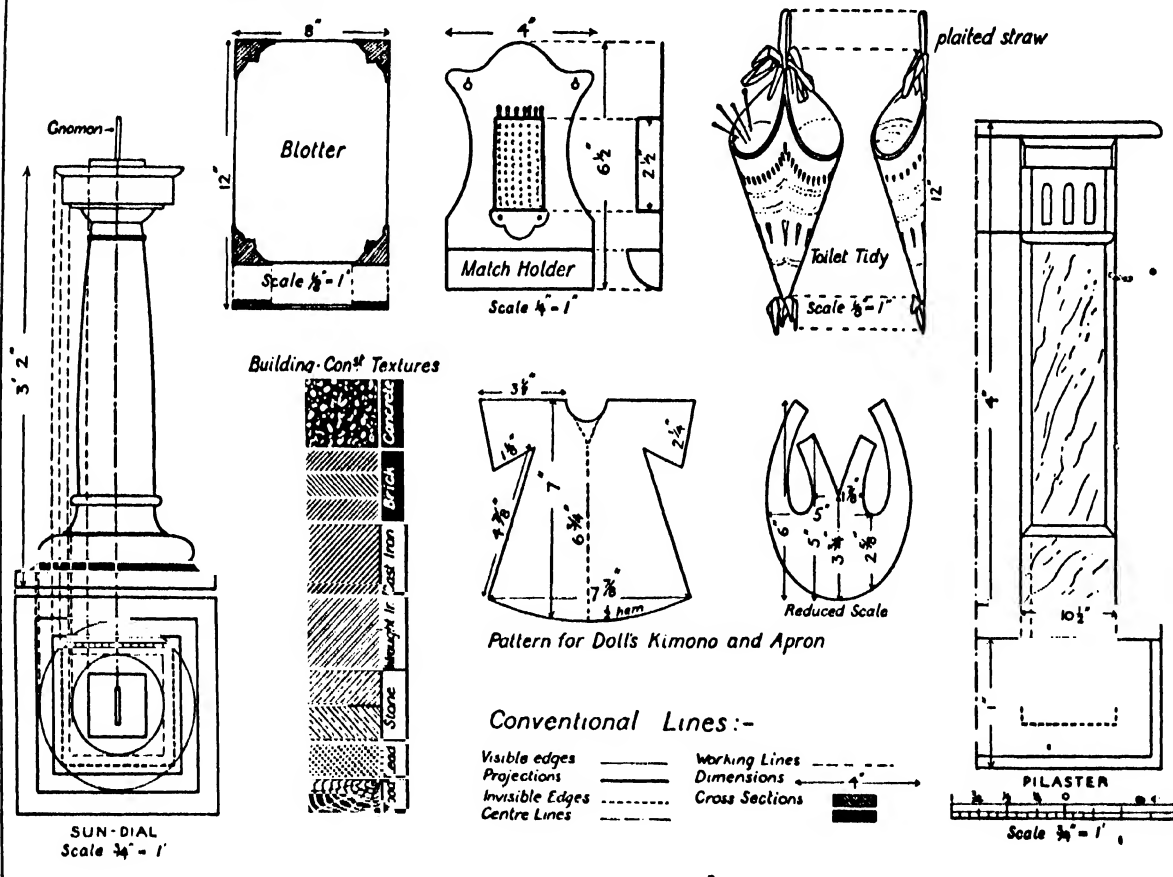
Painting and gesso ornament and staining could be applied to woodwork, if the teacher were conversant with the processes, which are comparatively simple. So is stencilling.

In fact the teacher finds here, as elsewhere under this system of "utilitarianism" in drawing, that the field is limitless, and that all through it is closely associated with handicraft.

Girls will make actual patterns of garments, either full size (for themselves or infants) or for the dressing of dolls (day and night attire, bathing costume, outdoor and indoor garb), and spend odd minutes in drawing many other useful garment patterns in a drawing book (to scale), other than those they actually carry out; so that they may have by them for home use a book of reference which should at all times, and after they have left school, prove most useful. Shoe bags, companion bags, tidies, dorothea bags, cushion covers, are other likely things. In this connection reference should be made to the Board of Education "Suggestions" (1909) on Needlework. One paragraph may be quoted:

PLATE XII

STS. V-VII. Objects drawn to be afterwards worked in Clay, Card^{bd} Needlework, Wood, Metal, Leather, Straw, etc.



“Further, it is well worth consideration whether needlework in the higher classes might not be more intimately co-related with drawing and arithmetic. A child whose eye has been trained in drawing lessons to observe form and proportion should be more capable of drafting patterns and cutting out, and if she has learnt to perceive differences in lines and curves she should do the work of adapting patterns and of fitting with greater facility,” &c.

There is no doubt that scale work is the most practical of all drawing, and should be continued right through all the senior-school classes, and never “dropped”. It is preferable if executed in Indian ink, at least in all later stages of the work.

Large things of a more pretentious kind, such as furniture—stools, &c.—the terra-cotta sundial, or architectural features such as the pilaster, show in what further directions this study leads, and how intimately elementary drawing is linked up with Building Construction and Machine Construction. A few generally adopted conventional texture renderings—useful at all times when different materials are to be distinguished in section—are tabulated in the column indicated, and will prove useful for reference. Ordinary conventional working lines are also given. Another technical branch is the drawing of maps and diagrams from dictation or description, or actual survey. The ordinary “scale-work dimensions” should, as a rule, be placed strictly at right angles to the dimension arrow.

There remains but a word to be said about one of the most important of all matters, and one which is engaging the attention of teachers in all countries, viz. *lettering*.

ALPHABETS FOR SCHOOL WORK

A B C D E F G H I J K L M N O P Q R S T U

V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

PLANE AND SOLID GEOMETRY

CHRISTMAS GREETINGS 1909.

Architectural Drawings . .

PRINTING AND LETTERING

Printing and lettering can be studied in many ways, and many alphabets may be adopted. Yet in the primary school their province can only be of the most limited description; the printing in maps, scale work, and simple lettering in juvenile design constituting nearly the whole field of immediate application, outside ordinary school "headings".

Hence those specimens here selected and shown are some that by experience present no difficulty, can be done with the ordinary school nib or a mapping pen, are sufficient for all school purposes, and have been used with the greatest ease and success in many schools. Their lines of construction are in some instances shown. Artistic calligraphy, known as cursive writing, and advocated by Mr. Grailly Hewitt, is yet another branch of the same subject.

The numerals require equal attention to the letters, and the more elaborate sets will only be attempted by the upper classes.

PLATE XIII

ALPHABETS FOR SCHOOL PURPOSES

Some plain Roman alphabets (Capitals and Small) are given on this plate, and they offer sufficient variety for most school purposes. Naturally, quite the simplest will be used by the younger scholars. They should first rule their own parallels, carefully print the alphabets selected, once or twice, and then proceed to print their names and addresses, and any other words the teacher should determine, until familiar with the type. The "construction" is quite self-evident in all the examples shown. It is better to adhere strictly to one or two sets in one year, or the children will be apt to get muddled. The practice might occur during certain of the "Mechanical Drawing" lessons.

SCRIPT ALPHABETS

ABCDEFGHIJKLMNOPQRSTUVWXYZ & .

WIDE: CDGOQ WIDE SQUARE: AHMNTUVWZ NNPRSY
NARROW BEFKLPRSXY. IJ VARIATIONS USING THIRDS AB EFHKM

ADAPTATIONS  1234567890

RSTUVWXYZ 1234567890.

CHRISTMAS. GREETINGS 1910.

VARY THICKNESS, SPACING OF WORDS & LETTERS, AS REQUIRED.

Alphabets for professional purposes.

ABCDEFGHIJKLMNOPQRSTUVWXYZ.

abcdefghijklmnopqrstuvwxyz 1234567890.

Architectural abcdefghijklmnopqrstuvwxyz.

PICTURESQUE DERIVATIONS

LONDON · E.C.

WORK CURVE STOOL

School Journey

SOLID GEOMETRY

1234567890

PLATE XIV

This is a plate for Senior Scholars, who may have special time granted them for practising "Lettering" as distinct from "Printing". The previous plate will have served as good groundwork. Here more freedom and originality of penmanship may be indulged in, within the prescribed limits of good models. These examples therefore exemplify the freer style of script or written character—found in old hand-made inscriptions and MSS.—in contradistinction to the more mechanical type-printed character. None but the Roman characters are shown—all Lombardic, Celtic, Saxon, Gothic, German, and fancy derivatives are purposely left alone, as being outside the immediate province of school work. It will be enough to gain some insight into the Roman and its derived modern styles, and some freedom and mastery in the construction of them. A deep study of them cannot be entered into. Nor can the equally interesting cognate subject of artistic calligraphy.

The large set at the top of this plate is a good, reliable, old classic model. From it all modern ones are derived. It should be carefully studied as regards spacing and relative proportioning of the individual letters into groups of "wide round", "wide square", and "narrow" letters; and it may be further varied by using parallels of thirds instead of halves as indicated in the other bracketed letters and numerals. It forms an excellent standard for all decorative inscriptions, mottoes, and illuminated work. The striking proportions of the various letters, as classified above, give a decorative and uncommon effect at once. They also supply noble-looking "Initials" or "Versals" as they are called, at the beginning of verses. These are generally coloured differently from the rest of the text, and elaborated with floreated pen flourishes. Inscriptions, mottoes, and verses should be compressed within margins or panels—oblong, square, triangular, &c. Spaces at the beginnings and endings of lines are often filled in with little pen-made decorations or interlacings; spots, waves, zigzags, scrolls. Sometimes letters are looped together—OO's; OG's; or linked—TT's; AE's.

At other times a letter like A, O, or U is reduced in size and conveniently inserted into an awkward space. Strictly speaking it has no "lower-case" or "small" letters; though these may be used in connection with it when required, by adopting one of the upright sets given on the last plate. Its modern counterparts, showing the more uniform spacing, are found on this previous plate.

Both this set and all others may first of all be represented in plain "block" form, without tails or embellishments. Thickenings and emphasis of tips are added later. It will be noticed in the model that the tip-finishings show a slight curvature due to the pen-influence.

Lower, on the left of the plate, are some simple *adaptations*. The first set is obtained by slight variations of curvature in stems and cross-bars, &c. It is developed from the simple stroke (as indicated), and further appears under the altered conditions of expansion (thickened at same time) as in the word *Christmas*, and of contraction in the more compressed word *Greetings* where the letters are thinner. It may be used under either of these conditions.

The *Alphabets for professional purposes* (Architecture, Building Construction, &c.) show in the first place a good sloping series, and secondly one with much extended serifs, adding a very distinctive appearance.

The *picturesque derivations* are fairly self-apparent, consisting of little devices already mentioned. Copy-book exercise headings, &c., as in the line SOLID GEOMETRY, are treated in a free manner dictated by the natural flow or flourish of the pen, and without any preliminary pencil sketching, practically in the manner of cursive writing.

The final set of numerals on this plate is much employed in artistic work, and is obtained by increasing the number of parallels on which it is constructed. The figures, although on different levels, combine admirably. There is an art in all this!

Graphic Expression and Figure Drawing

Study of Pictures and Architecture

Schoolroom Decoration

GRAPHIC EXPRESSION AND FIGURE DRAWING

This section of School Drawing is known variously as: Expressional or Illustrative Drawing; Imaginative or Recreative Drawing; Illustrative Sketching; Inventional Drawing; Descriptive Drawing; and Pictorial Representation. We may choose any or all of these titles.

The investigations of psychologists and the experiments of practical teachers have shown how strong is the child's predilection for graphic expression, or story-telling in line; long before it can express itself in written character or even in perfect speech. Like with the barbaric races of mankind; with prehistoric man and all the early civilized nations of antiquity—there is that in the graphic “point” which facilitates the expression of visible things, and so becomes a means for the conveyance of thought.

The earliest pictographic or illustrative sketching of infants from three to six years is ex-

tremely interesting from the psychological point of view; but hardly need be taken seriously into account when framing a general school course. Hence, in the following Plates, it suffices that the age of six be taken as the starting-point, and a fairly regular and progressive sequence followed after that.

The old question as to whether figure drawing be a subject or a method here arises: and the only answer that can be given is that it is, or should be,—both. It is perhaps owing to this controversial uncertainty that the subject has been neglected.

It is quite clear that children of ten or thereabouts lose interest in attempting to depict the human form, partly owing to their growing critical powers and dissatisfaction at inadequate caricature, partly because they do not feel inclined to call down ridicule from their elders,

Graphic Expression and Figure Drawing

or are oversensitive to the criticisms of their fellow pupils; but mainly because the teacher himself is afraid of the subject, which admittedly is a very difficult one. To be perfectly frank, it requires a specially qualified teacher or the oversight of an expert art teacher to ensure the direction of the exercises along the right lines, for all those above the age of infants. Given this, it is neither difficult nor unattainable, and affords a most pleasant upper-school exercise in the hands of the class teacher. So the break in so many schools (from six to twelve years) is to be deplored. With the expert supervision above mentioned, the exercise might feasibly be continued as a "method" right through, showing gradual improvement in the pictorial illustration of composition lessons, essays, notes on history and geography; becoming in fine a fully recognized means of expression in addition to talking, writing, and modelling, supplemented by some direct practice in the drawing lesson proper.

There certainly is a place for it in the actual drawing lesson. The drawing of Natural and Common Objects may be made the "peg" on which to hang it; in either of two ways. The "imaginative story or event" may be depicted first, then afterwards its main or symbolizing

"object" more carefully drawn in the full drawing lesson. Or, on the other hand, having drawn the object in the drawing lesson, a few minutes may be spent in depicting it being put to actual use, either by directly observed action, or from pure imagination.

This further plan has also been adopted. Some very original and praiseworthy results have been obtained in a senior school by supplying scholars once a week with small sheets of brown or white paper, and allowing them to use crayons, chalk, or water colour at home. The drawings are submitted to the teacher next day,—not so much for criticism as for praise,—and then deposited in a brown paper envelope possessed by each scholar, who thus adds by degrees to his or her collection. The work may be as free and original as the scholar desires, and the good points only are commended. The subjects are set by the teacher, and the "self portraits", "prairie fires", "ancient mariners", "arctic explorers", "alpine scenery", "Sahara deserts", thus produced are in many ways remarkable, and show how much may be done by such simple encouragement. And the boys and girls are as keen as they can be.

It is well known that in the "inventional sphere" scholars of about ten show, perhaps

in equal proportions, a predilection or native capacity for either "Pictorial Representation", or on the other hand "Inventive Design". They are rarely equally good at both. Often the scholar who is smart at realistic representation and perspective drawing, is totally lacking in inventiveness of pattern. Others will readily invent quite good mechanical patterns, and yet never master foreshortened views. We should give the fullest opportunities for the practice of both.

The one branch is now under consideration, and the other, viz. Design, is dealt with right through the whole of "Free-Arm and Industrial Drawing". Plates IV, V, and X in that work deal more especially with "Pictorial Illustration".

With regard to pictorial illustration a practical teacher has stated: "They enjoy doing it; it is interesting and helpful in their work, and it reveals much to the teacher. In fact, next to action, drawing is the most natural method of explanation known to children, more so than writing, or even speaking. Let them try the graphic method of expression."

All such caricatures by children have been well termed *extractions*; whereas the figure work of great artists may be described as *abstractions*.

All the great educators from Comenius, Rousseau, and Pestalozzi downwards have advocated such intuitive drawing as possessing both vitality and interest. Those spirited but wooden-looking, gaudily-painted drawings of Noah's Ark animals very forcibly convey the results of the child's observation, and are very full of meaning to him if not to us. Building on this, a promising attempt is now being made in the United States to further develop in the upper schools "graphic drawing" into "commercial drawing". It is an endeavour to induce skill in the expression of ideas in graphic terms, so that drawing may meet the more commercial conditions of the present day. More drill is to be given in the quick application of principles. Emphasis is to be placed on rapidity of execution, thereby recognizing that "power of drawing depends upon the ability to place a few leading lines in their proper position"; and that "'finish' simply means the addition of details to the sketch". Objects are to be quickly drawn from sight and memory *to time* in this way: with pencil, brush, and pen. Expert art supervision is everywhere exercised throughout the schools to secure this.

Illustrative Drawing is indeed a system of shorthand drawing—a system of omission and

Graphic Expression and Figure Drawing

elimination. As in the hieroglyphic paintings of the ancient Egyptians, the synthetic plan must be adopted, not the analytic. Unnecessary details must be passed over; essentials only recorded, with as few telling lines as possible. This is what the child if left to itself invariably gives you. Facility in execution comes only as it does in writing; "finicky" work is useless. Direct work is required, characterized by "go", "action", "vitality".

"Life" work becomes the one and only solid basis of improvement, supplementing all unaided imaginative drawing; and by it is meant the sketching of fellow scholars or people in the street, from direct sight or memory, in all manner of poses and attitudes. The "Play-History" topics supply plenty of ideas.

The "laws of composition" come to be more thoroughly understood; for it requires some judgment to nicely place the subject in a given oblong, square, or semicircle, just as the photographer has to reckon how to fit his subject into his square or oblong plates or films. It is in this connection always wise to insist upon having a good thick frame line placed round the drawing to isolate and properly contain it. Squares and oblongs are the most common shapes to be used. Then leaving a narrow

white margin, the drawing may be cut out and mounted on brown or grey paper, which duly "sets it off".

Mr. P. B. Ballard, M.A., who has recently, like Dr. Kerschensteiner of Munich, Professor Earl Barnes, and others, so thoroughly gone into the subject, says: "To the question: What will a boy of a given age draw if he is allowed to draw what he likes? there can be no definite answer. It is only possible to state certain probabilities. But even this presumptive knowledge is of value to the teacher." And he goes on to show what scholars like to draw, or draw best, at certain ages from three to fifteen years. Human beings, animals, birds, and insects, fishes, plant life, vehicles, houses, weapons and instruments, objects and landscapes, were all investigated in this order. His data were obtained from the examination of some thousands of drawings. For fuller details see his article in *The Journal of Experimental Pedagogy*, March 5th, 1912. Taking the case of human beings. The age of nine marks a critical period. Before that age the human interest is paramount, full faces predominate. After the age of nine, however, there is a tendency to shirk (as above explained) the human interest, and profiles predominate. "It is fairly certain that some-

time about nine or ten years of age, imaginative drawing tends to pass over to observational drawing." Before that period the child prefers to draw from past observation; after that period he takes more kindly to present observation—which implies that actual "life work" from observation may usefully be begun. He ascribes the general shirking at this age not to want of interest, but, as we have previously noted, to the child, and perhaps we should also add the teacher, being repelled (and rightly so) by its difficulty.

It is to meet this difficulty that these Plates have been prepared. Let the exercises be carefully graded according to the age and capabilities of the scholar, and he will succeed, with much enjoyment into the bargain. They show the actual work of children from six onwards, and chiefly those who have passed through a "Four Years' Course" (ages ten to fourteen) in the hands of an expert teacher. The majority of these, although they had not worked any such exercises previously except in the Infants' School, took to them kindly, and nearly all began in time to shape fairly. Some samples have been selected, not always the best, illustrating the variety of the exercises. The achievements in

high schools where pose drawing has held a more conspicuous place, have been very considerable in this direction. It is interesting to note that younger boys have a liking for humorous drawing, comic figures appealing very strongly to them. Caricature or exaggeration should be looked upon as a real asset in the spontaneous drawing of young boys. Girls prefer dainty figures.

Until quite late, say twelve years of age or so, the representation of houses and buildings remains very rudimentary. The only remedy in addition to playground sketching is the copying of good book Plates from school-readers or elsewhere, or from picture postcards. Drawing from those little toy "Bungalows and Trees" supplied to Infant Schools, from dolls' houses, or from recollection of the houses in the scholar's own street is a further aid.

Animal life is rarely managed with any success, and a town child knows little more about a cow, or goat, or sheep, than he does of an elephant. The general weakness in this branch (not altogether to be wondered at) can only be overcome by degrees, by constant reference to pictures, toy models, or by the careful observation of pets, of "pussy", of "doggy", and so forth.



STUDY OF PICTURES AND ARCHITECTURE

The methodical study of fine pictures and the world's masterpieces by means of reproductions, is a powerful stimulus to good figure work. It is here suggested that following on the figure drawing of the Third and Fourth Years (ages 13-15), there should be given occasional lantern-slide lectures (just as in other subjects), simple talks on "Beautiful Pictures and Statues" or on "Architecture". An occasional hour spent this way, followed later by a written essay on the subject of the talk, would go a long way towards cultivating some ideals of taste. Visits to local Picture Galleries and Museums are, in all our larger cities, already undertaken; and in some very advanced districts, under the organization of the art authorities, splendid facilities have been thrown open; while perambulatory visits of art experts to the

schools have been arranged for, in order to supply a series of art talks to the children.

The optic lantern is now so frequently used in schools that it becomes very necessary that local authorities should obtain a good stock of slides of "Pictures" and of "Architecture". Unfortunately the writer is unaware of any really complete set on "Architecture" being supplied to public day schools. It is a most sorely felt general want, for a slight knowledge of the architecture of nations is like reading in the book of nature the history of their past, their very life, growth, and ultimate decline; as well also as the meaning of all our surroundings of to-day.

Failing the supply of lantern slides, there might well be allowed on the requisition list those cheap little 6d. illustrated handbooks of

Gowans and Gray, masterpieces of Painting, Sculpture, and Architecture, English Cathedrals, French Cathedrals, &c. It would cost little to supply a class of twenty-five scholars with one or other of these sets.

In reference to the study of pictures the author had occasion in a recent London University Extension Lecture to offer some advice in these words: "Take your scholars to the Tate Gallery before you take them to the National Gallery: they will the better understand the *motif* as well as the beauty of those pictures—it comes nearer home to them. 'Mariolatry' was the creed of the devout old painters, it tinctures all those great masterpieces, but it is somewhat remote from modern

life. The rather was it at the Tate Gallery that a little schoolboy and his companion—their attention engrossed—accidentally ran into the observer, while exclaiming before Furse's noble 'Diana of the Uplands', 'Ain't that a fine un!'" The modern boy or girl is more impressed with the pathos of "Derby Day" or La Thangue's "Man with the Scythe", than with the Raphael Madonna; just as some tattered urchins in Kensington Gardens, coming suddenly on Watts's grand statue of "Physical Energy", thought it must be the work of the Creator! First, then, an intellectual enjoyment of modern masterpieces, then a finer appreciation of the old masters. This view may help also in the selection of school pictures.

SCHOOLROOM DECORATION

There is a general movement afoot towards making the school classroom as attractive and artistic as possible, and in a double sense the Art-room and School Hall. Trees, school gardens, and seats, with sometimes a bird dish, terra-cotta sundial, or small fountain, are also claimed as legitimate playground adjuncts. Many schoolrooms are already tastefully arranged, while the general atmosphere is one that at once impresses the observer. Reproductions of good pictures, photographs of cathedrals, and decorative coloured lithographs adorn the walls, dirty and shabby old pictures being ruthlessly "scrapped". Fresh paint and the combat with inevitable dirt and sometimes real squalor go manfully on. It must tell in the long run.

One or two good reliefs (or large photographs of same), as, for example, Donatello's Sta

Cecilia; his "singing children" from the "Singing Gallery" in Florence, or Lucca della Robbia's from the organ loft of Florence Duomo; or portions of the "Parthenon Frieze"; or Harry Bates's "Homer" or his "Hounds in Leash"; all when nicely waxed (if casts), mounted in artistic dark-oak frames, and firmly attached to or inserted in the wall itself, add a touch of dignity to any hall.

A few small terra-cotta copies of Tanagra statuettes, such as supplied by Messrs. Reeves & Son, Ltd., are also very telling and graceful in effect, and a few may be obtained at a moderate outlay.

Likewise small terra-cotta sundials (for playgrounds), or little figure panels and statuettes of choice design and pleasing colour, may be obtained from the "village industry" factory of Mrs. G. F. Watts, at Compton, Surrey.

They form charming little ornaments, most suitable for their purpose.

A few pieces of pottery of good form and rich colour add much to the cheerfulness of a hall, providing they are well dusted!

Well-designed school notices on the School Notice Board help appropriately to carry out the æsthetic spirit; while perhaps the chief feature of classrooms should be their general tidiness and freedom from litter. An air of simplicity and refinement is eminently desirable. Scholars' work should be exhibited only in reserved spaces or on the notice board, and not all over the walls: and it is obvious that the notice boards themselves should be of good design.

So much is already done in this direction that perhaps some apology is needed for thus

indicating, however slightly, some means for promoting this desirable end.

The following firms are some amongst those well known for their supply of suitable pictures:---

The Fine Art Publishing Company, Ltd.,
15 Green Street, London, W.C.

The Medici Society, 7 Grafton Street, London, W.

The Autotype Fine Art Company, Ltd.,
74 New Oxford Street, London, W.C.

Messrs. Hanfstaengl, 16 Pall Mall East,
London, S.W.

Messrs. Asher & Co., 14 Bedford Street,
Covent Garden, London, W.C.

The Art for Schools Association, Blooms-
bury, London.

The Berlin Photographic Company, 133
New Bond Street, London, W.

DESCRIPTIONS OF PLATES
(I-XII)

PLATE I

1. Imaginative sketch by an infant of six—subject, “Putting on Father’s Overcoat”. The “key” object: Coat-hanger. The “key” object should always be associated with the story-telling. Teacher’s analysis in three stages (1, 2, 3) of the actual coat-hanger, after child has first drawn it. Likewise teacher’s rendering of the overcoat in the cupboard to point out defects in child’s drawing. *Note* in the child’s drawing the large arms of the man (idea of strength in helping): also shortness of the coat with its arms sticking *out*, instead of in suspension.

2. Infant sketch of “Washing Day”. *Note* exaggerated size of pegs and want of droop in the suspension of the clothes. Teacher’s demonstration drawings of pegs (two varieties) are shown with a cloth blown by wind. A clothes’-line may be suspended for the purpose in the schoolroom.

3. (a) Child’s imaginative drawing (without previous inspection) of a “Sentinel on Duty”.

(b) Teacher’s representation to child by sketch or picture.

(c) Child’s memory sketch afterwards. *Note* improvement in pose; position of legs; general idea of clothes, with contrast in colouring sug-

gested by shading. Sword, however, still remains off the shoulder.

Some teachers give help to the children in these earlier stages by handing out little cut paper figures which they have culled from various sources—picture-books, &c.—then hektographed or traced, and afterwards cut out in quantities. The children receive one or more of these apiece, and resting them on small squares of brown paper are allowed to colour them in paint or chalk. They then lift them off the brown squares and the teacher selects the best. These are pasted by the teacher on to a prepared background, a large card or sheet drawn out previously by the teacher, showing the “settings” of the story. The children themselves tell the teacher where the figures are to be placed. Whole scenes like street scenes, farm scenes, railway and boating scenes, Christmas trees, are put together in this manner. One part of the class will supply the row of houses that go to form the street, others the pedestrians, others the “buses”, the motor cars, the lamp-posts, all pieced and arranged at the children’s suggestion. Their “vocabulary” of “representative objects” thus rapidly increases with every new incident depicted.

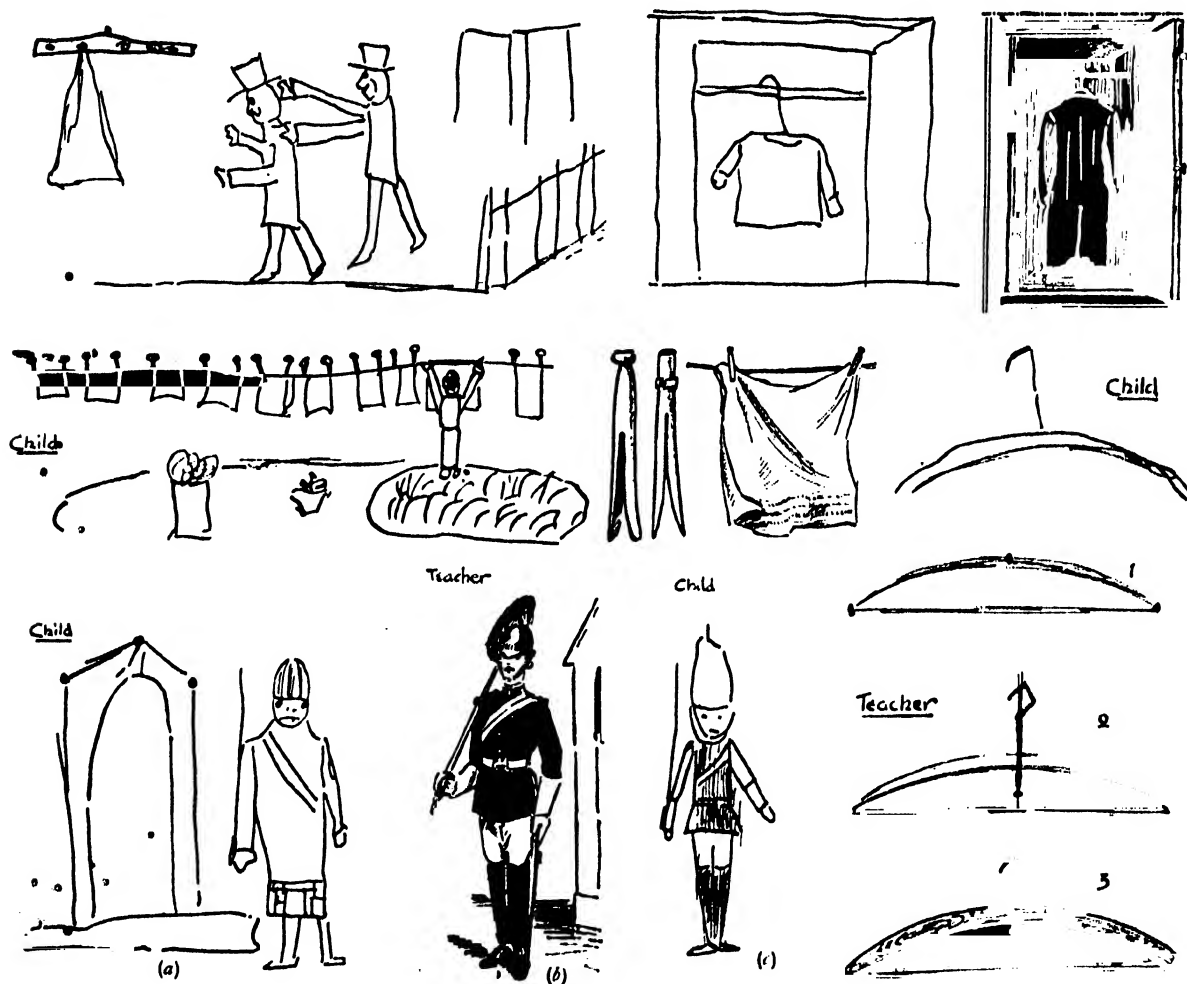


PLATE II

This Plate traces the necessary course of development in figure delineation for a child from six years of age onwards.

He is led by some such exercises as shown in column A, to secure some grip of form, proportion, and action in six stages from the crude "tadpole" idea (I) to the more mature adolescent (V and VI). A scale of proportion of "heads" is shown, and may be constantly applied even at an early age for testing the first "skeleton" or "stick" men. Clothing and flesh are added, as at III, and Dutch dolls used in demonstration IV. Figs. V and VI are obtained with as few lines as possible, just to tell most succinctly and graphically the "action". At B are shown Teachers' Black-board Sketches of the proportions and positions of the head swinging on the pivot of the ear; also a further analysis of details. These of necessity are for older scholars.

The head roughly is an oval. Put in first the medial or facial line. Then the horizontal cross lines, marking three equal divisions: (1) through line of eyebrows, (2) through tip of nose. The eyes and mouth lie just below these horizontal divisions.

Taking the eye as the *standard* of the head, just as the head is the standard of the body, this follows. Distance (front view) between the eyes, equal to the length of an eye. *Note* the almond shape of the eye and its slanting

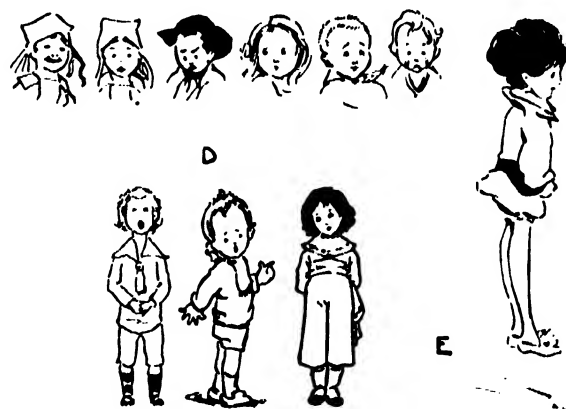
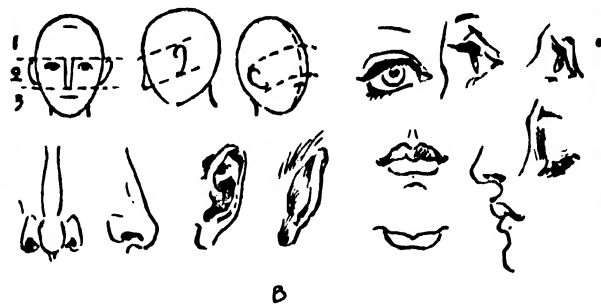
direction from the nose (downwards and outwards in Europeans, inwards and downwards towards nose in Eastern Asiatics). Length of nose about an eye and a half; width between nostrils one eye; width of mouth about equal to length of nose. Length of ear equal to length of nose, and distance from ear to tip of nose equal to distance from chin to eyebrows.

Note in side views the distance from corner of eye to root of the nose (for it is a frequent source of error). It is about half an eye. *Note* the parts of the nose: its root (forehead end), bridge, lobe (tip), and the two wings containing the nostrils.

Note how the top lip is thinner than the bottom and is divided into a central lobe and two wings (three divisions in all), while the bottom lip has only two lobes. Mark well the shape of the ear with its inner and outer rims, opening, and lower lobe; also its peculiar attachment to the head, back view. C represents some simplified familiar animal forms, devoid of details. Use any wooden or mechanical toys for demonstration.

D. A row of little heads illustrating "expression". The emotions are suggested by mere dots and dashes for features. E. Four little expressive figures of the Hilda Cowham, Monvel, Attwell, and Sowerby type of child. They "tell" by their very simplicity. So also do the children's books of Walter Crane, Kate

Stages showing the development of
child delineation in Figure-Drawing.
Nos. I - II



Greenaway, Hassall, Folkard, H. Willebank le Mair, and many others. The daily humorous cartoons of Haselden are good copy for boys who are fond of caricature. Copying, or even tracing, and painting examples of all these artists is good practice.

Some details explaining more fully the course set out in column A are here given:—

I-III. First get the "tadpoles" into some proportion by making them "stick men" (II) expressive of action and combined groupings. When incident can be shown pretty easily this way, have the figures clothed as (III). *Note* head (standard of measurement for the whole body) is one-seventh or one-sixth of length of body; *position of hands* (in front upright view) *is halfway down from shoulder to feet.*

IV. Follow with the "Dutch Doll" Stage.

Use actual doll to take poses, strike attitudes, and so on. Add clothes afterwards.

V. "Attitudes" shown with as few lines as possible in simple "sweeps". Curves or straight lines may be used at will. *Note* the little dog composed of straight lines only, also animals on another part of the Plate.

VI. "Silhouettes" (i.e. masses) more carefully attended to, and comparison in tones, e.g. Black (the sweep), White (the snow man). "Action" suggested as simply as possible (the cyclist).

The greatest difficulty lies with the hands and feet. Children *will* make them too small proportionately to the body, arms, and legs. Extended hands equal in length distance from eyebrow to chin; feet about length of whole head. Length of arms and legs are obtained from the "head" standard.

PLATE III

This is a Plate of direct pen or pencil sketching (no indiarubber being used) of pupils ranging from six to fifteen years of age. They are original and intense. A. A series of heads drawn for amusement without copy by a child of six. They are evidently reminiscent and are very quaint. B. Picture by the same child, representing herself as a "fairy" in fancy dress. Also another showing herself dancing with her

dancing mistress in fairy scene; and being driven by reins. C. Some little random sketches by a child of thirteen. They were "dashed off" in ink in a small notebook, just "for fancy", while the young person lay in bed. D. Memory portrait sketch direct with the pen, by a student of fifteen years. *Note* the general development running all through these drawings, although the young people were in no way related.

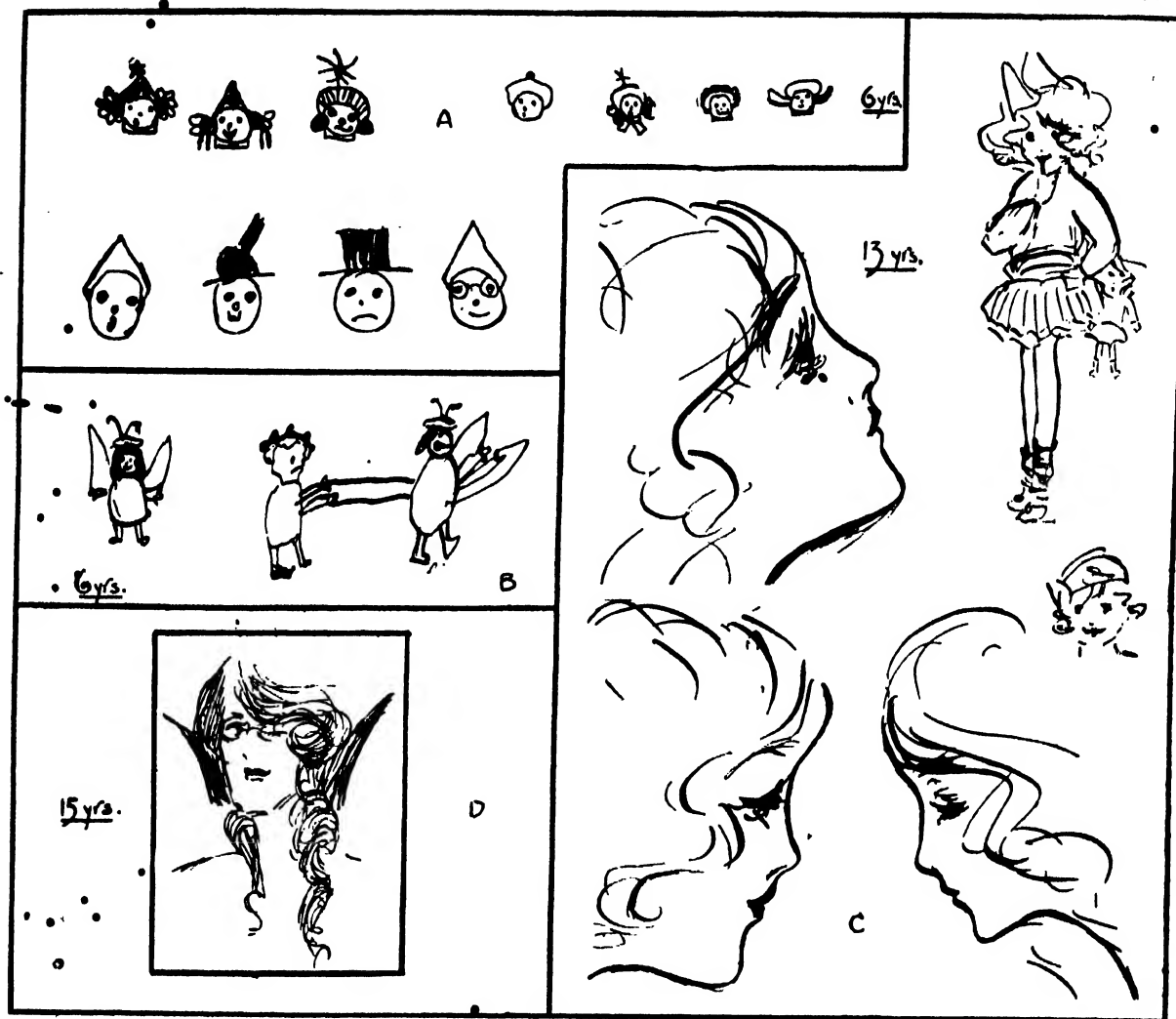


PLATE IV

There is here shown an infant's representation of a "game of football". *Now* the exaggerated size of the central fact—"the ball". Also mark the attempt at perspective appearance in the goal nets. This sketch gives a good idea of action and incident.

Below are shown two blackboard sketches by the teacher, and their success will depend wholly on the principle of elimination, using

the fewest strokes possible, absolutely no detail, and leaving the imagination to fill in all gaps. The wave conveniently fills the picture of the "Whiteship": the crowd in the second are treated as units and ciphers on the plan of "key" pictures to large portrait groups. Everything depends on "suggestion", just as in the child's sketch.

PLATE V

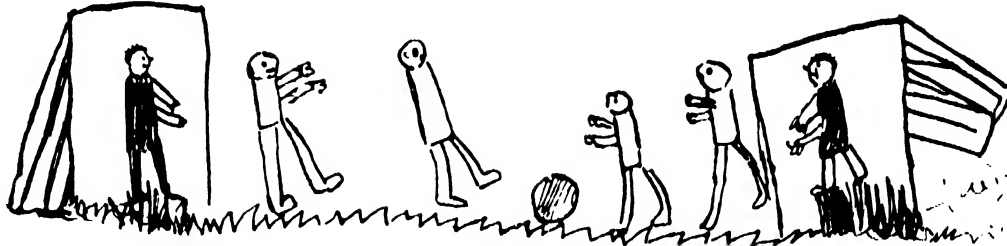
Here are introduced simple illustrations of the more easily grasped elements of *perspective*, *shadows*, and *reflections*. For older scholars these *facts* (for no theory is wanted) are quickly assimilated, and they help a picture composition which shows architectural features and converging lines to look much more correct and natural. Beyond the horizon line, and converging lines, no others are wanted, and all these can be quite readily sketched in, in free-hand. About the age of ten or eleven is early enough to begin. The eye itself is the chief judge, and some children show quite a native feeling for perspective even before instruction. Such chance perspective is known as *inventional perspective*, and even when corrected still remains as such so long as it is "invented" from imagination alone, and not drawn from actual

sight. This is how the Egyptians, Chinese, Pompeian artists, and primitive masters worked before perspective became a science in the hands of Paolo Uccello (1396-1479).

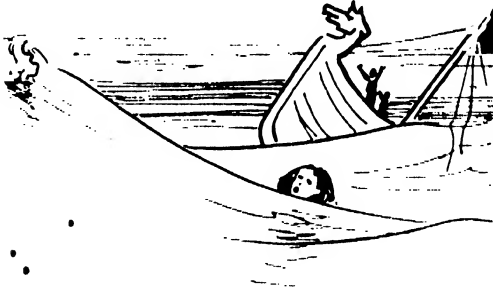
Dolls' houses for exteriors and interiors are sometimes useful. Toy bridges, castles, and trees also come in handy. The geometrical models can be built up into the rudimentary forms of castle towers and roofs, and clothed with appropriate detail afterwards. Thus both *above* and *below* the eye level may be dealt with.

I. Horizontal line (sea horizon) is marked with π (point opposite eye), known then as the centre of vision. The lines of the house and the poplar trees, being on the "level" or horizontal plane, vanish to π in the horizon line. The road on the left is in an "ascending plane",

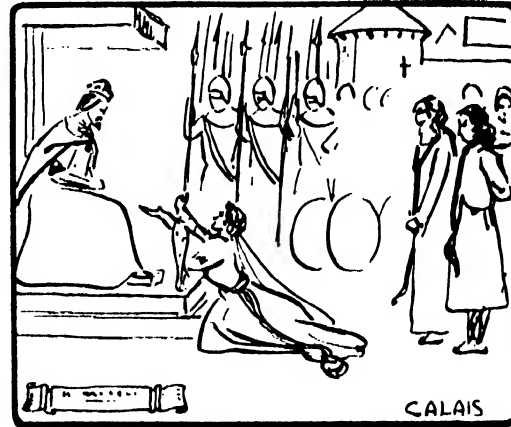
By child of Six years.



Blackboard Illustration - (Teacher)



WHITE-SHIP.



A.P., which is tilted up to the altitude of A (over E). All lines of the road and fence "vanish" (converge) upwards to a point on the vanishing line A.P. There may, of course, be other v.p.'s.

The road on the right is in a "descending plane" (D.P.), to the depth of D. The wires of the telegraph poles and row of trees vanish with the road down to a point D in this line. Staircases are dealt with on these principles.

II. The lines of the pier vanish to a point on the right in the horizontal line. The under sides vanish to a point on the same line to the left. The size of the distant bathing figures is determined by the height of the child in front carried back to the horizon.

III. Note convergence of all lines of the pier to c.v. (centre of vision or eye). Notice length and direction of the shadows which indicate that the sun is fairly low, on the right, behind the spectator.

IV. Exemplification of the law of *reflection* that "the angle of incidence is equal to the angle of reflection": in other words, there is shown the exact reverse of the object appearing in the reflection. Apply this as here depicted to the child (II), and the post and punt. Experiment with any piece of looking-glass.

V. *Shadows*.—Rays of light at 45 degrees falling on the square slab, are in the picture itself; and therefore form parallel rays which strike objects at all points, and pass down to

corresponding points on the ground, within lines drawn horizontally from the base of the object, or objects.

VI. The position of the sun is indicated (as in a sunset) behind the object. Note the length of the uncompleted shadow. The necessary ground lines are obtained by drawing them from a point exactly vertically below the sun on the horizontal line.

VII. In this case the sun is behind the spectator. Being the reverse of the last case the sun's rays vanish into the picture to a point v.s. marked on a vertical line *dropped from* the direction point or angle where the rays meet the horizon: because the rays must be to left (or right) and *downwards*. Note the rays are drawn from the object to v.s., and not from s to the object as in last case.

VIII. Example of *artificial lighting*. Here the ground lines *radiate* from a central point exactly below the source of light on the ground itself—not the horizon—just as though from the foot of the lamp-post. Having drawn these radiating lines on the ground, carry corresponding rays down from the light to terminate them.

IX. Another instance where the light is suspended not supported. An imaginary line is dropped to the floor—which spot in this rough-and-ready pictorial sketching must be merely guessed. The rest is easy and self-apparent.

Perspective : Shadows : and Reflections

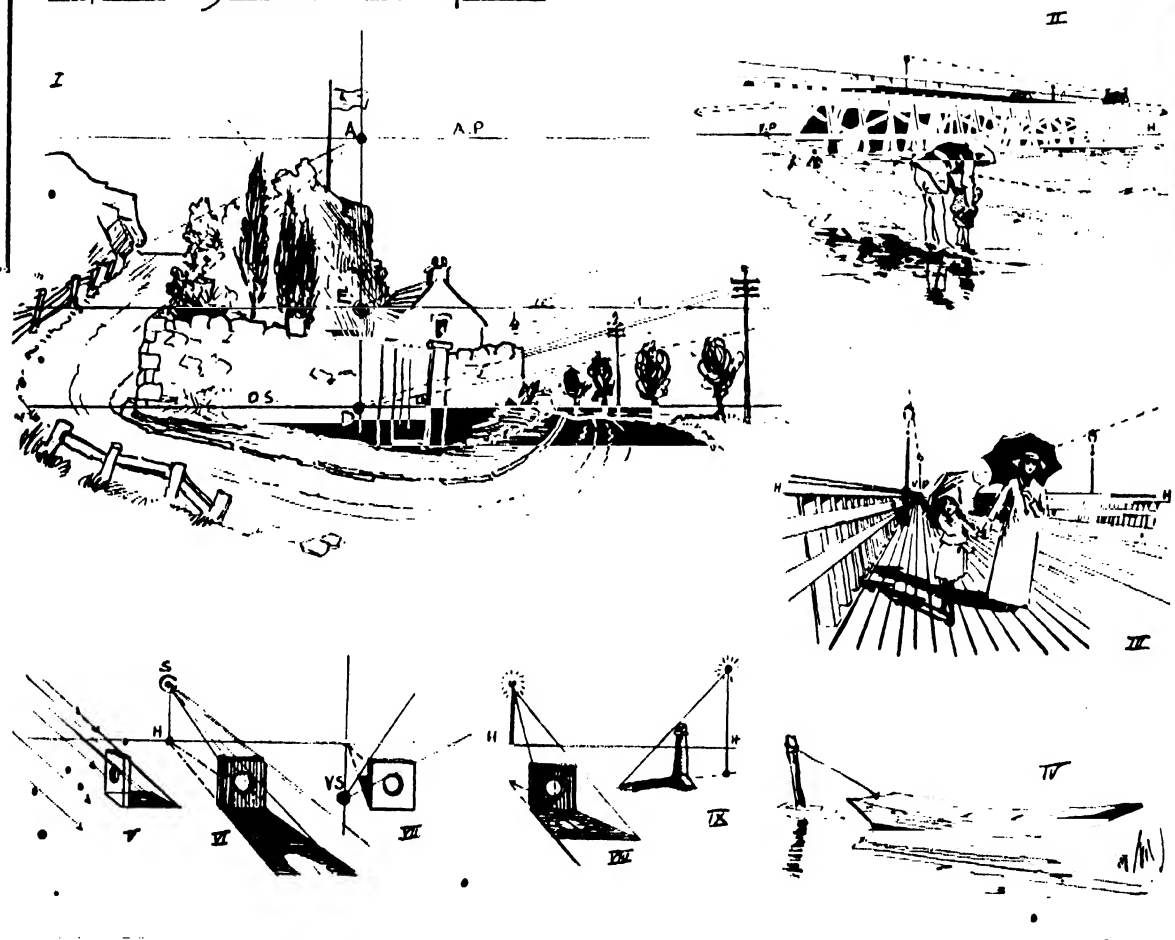


PLATE VI

I. These are some random trial scribbles (direct pen) of a pupil of fourteen or fifteen years of age who had become a student in a School of Art. No previous pencilling was used. They are shown to exhibit how ideas are worked out from a nebulous scribble by

all artists and art workers in the struggle to *see* their thoughts.

II. Fashion-plate trial sketch by same young student to same end. Fashion-plate work is one outlet for figure work open to really promising and talented pupils.

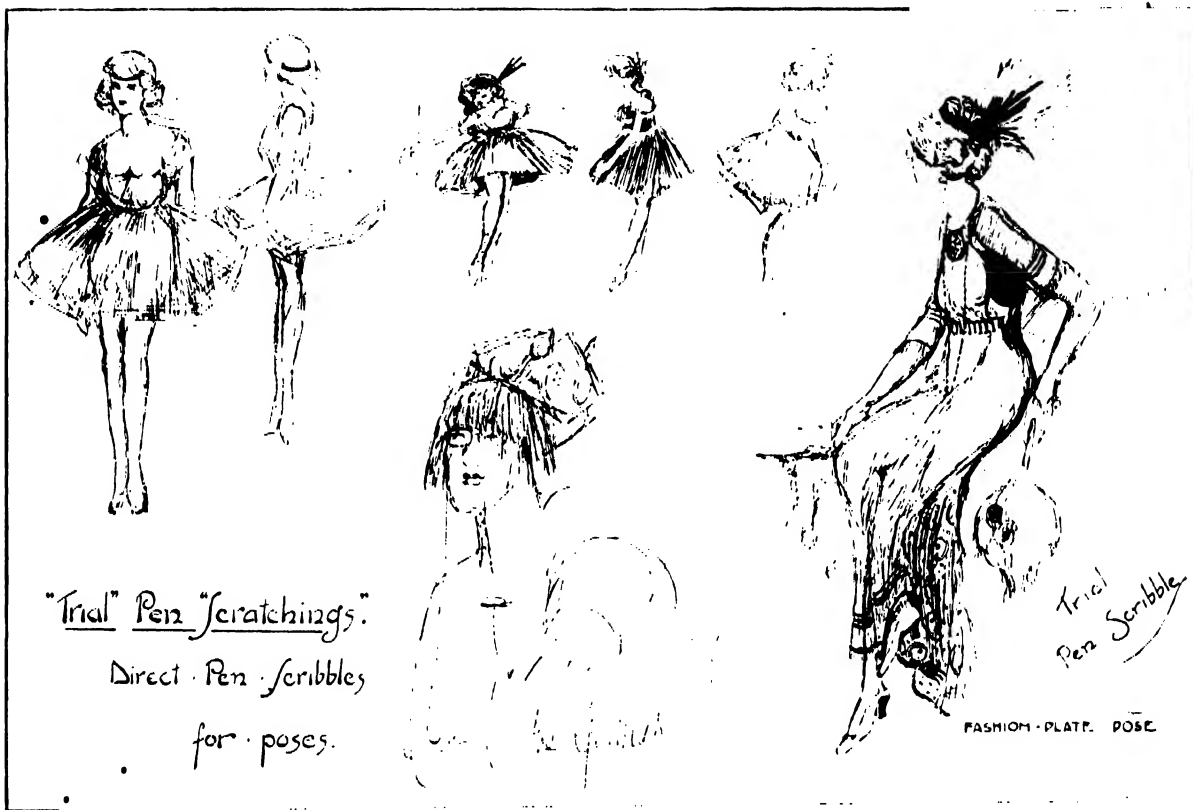


PLATE VII

A scroll of artistic lettering to be produced with a quill or reed pen or with a soft J nib. It is the best kind of lettering for all advanced artistic work, for bookplate illustrations and illuminating, and inscriptions and titles in figure subjects. It may be set to any ambitious and promising pupil who wants to make his work look really good. The point of the quill should be cut at a slight angle (as in illustration) with sharp knife or razor, and the pen held in the upright position, as at t, for all letters except AVXWY, when it

should be slanted as at x. It is slanted for the Arabic numerals also. Curved tips may be worked upwards or downwards at discretion. A few "line finishings" are added for the filling of blank lines in poetry or for borders.

A very useful reed pen called the "Kelemi" pen, much used in art schools, may be obtained of Mr. John Hogg, of 13 Paternoster Row, for 2d., post free 3d. Gillott's will supply 1s. sample sheets of steel drawing and lettering nibs.

Scrolls should be practised from good bookplates: they are most useful.

PLATE VII

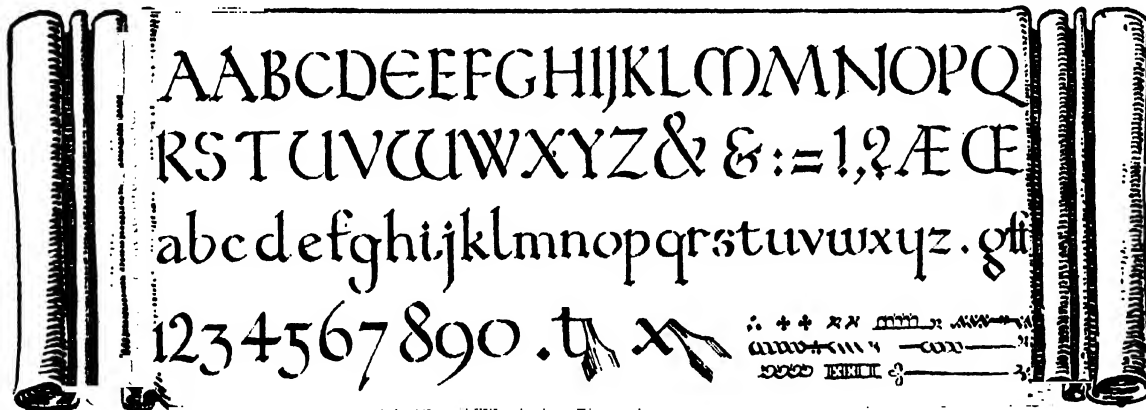


PLATE VIII

These delightful little silhouettes are to exemplify good *Figure Composition*, rhythm in movement, and expressiveness in arrangement. They are produced by Messrs. B. G. Teubner, and sold by Messrs. Asher & Co., 14 Bedford Street, Covent Garden, W.C., the sole agents. It is through the kindness and courtesy of Mr. Teubner that these beautiful little Plates of K. W. Diefenbach are here shown, taken

from the catalogue of the remarkably fine coloured lithographs of that firm, which are so popular as bold and effective schoolroom decorations. This set is very popular in Germany, and the size of the originals is each about 14" x 7". The writer wishes here to express his fullest acknowledgments to Messrs. Teubner for their kind permission to use them.

PLATE IX

This Plate shows the analysis of the lines of force, rhythm, and motion which underlie the compositions. Note how entirely different and distinctive they are in each group. Such lines of harmony and arrangement are found in all great pictures. It is no bad plan for a pupil to be allowed to trace over on tracing paper, picture postcard reproductions of famous pictures for the purpose of finding out their lines of arrangement. Then black-in darkly, as here, the discovered lines of composition.

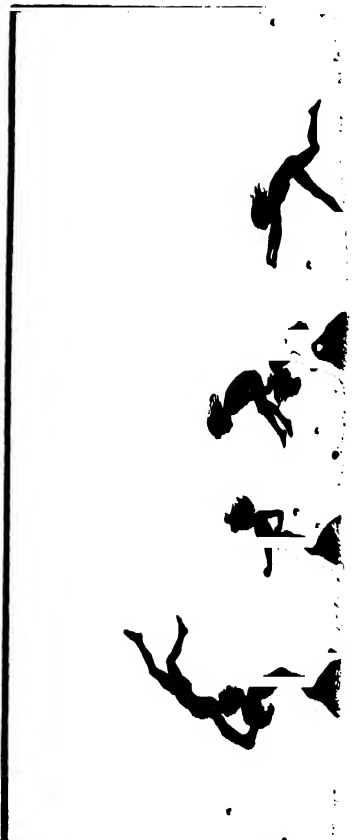
There are two main lines of composition in pictures, statuary, architecture and design, just

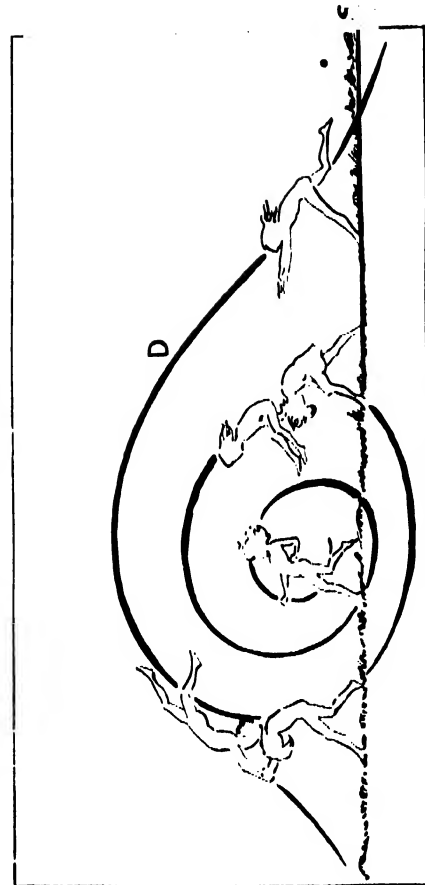
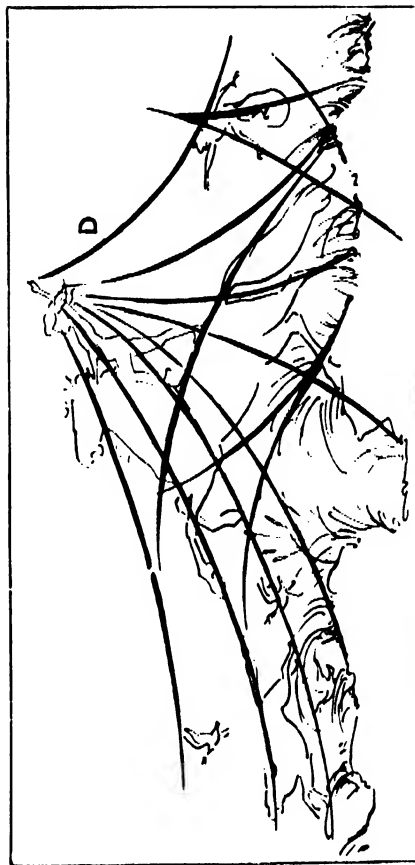
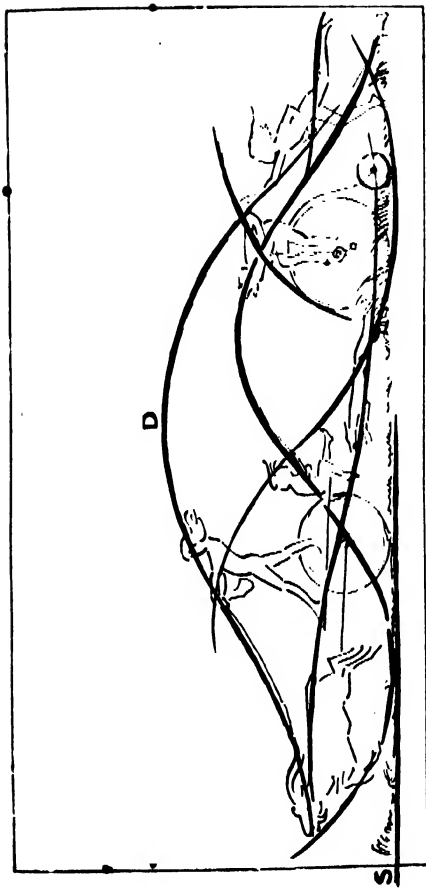
as there are two forces in nature, the *Dynamic* and the *Static*, activity and passivity, motion and rest, movement and stability, the horizontal and the vertical. These lines are indicated relatively on the diagrams as *v* and *s*.

The first illustration shows waves in motion *v*, counterbalanced by the ground line *s*.

The second reveals leaping upward lines to the apex of the triangle, full of soaring vitality culminating in the uplifted hand.

The third is smooth and regular like a watchspring, the spiral rolling as it were in measured turns over the "stable" ground.





Analysis of "Composition"

PLATE X

This Plate and the following ones show reproductions of the actual work of scholars (girls) passing through a Four-years' Course, their ages ranging from ten to fourteen years. It was found that they had not done anything of this kind since the infant school.

For the first two years, sketching heads from life forms the chief practice—scholars taking it in turns to pose for the class. Lesson, one and a half hours per week, taken in the Art-room under an experienced teacher.

The proper proportions of the face were talked about, as in Plate II, and other details discussed. The blocked-in oval was the first stage, and in the First Year only profiles were attempted. The facial line was divided into its three parts, and the outline carefully added;

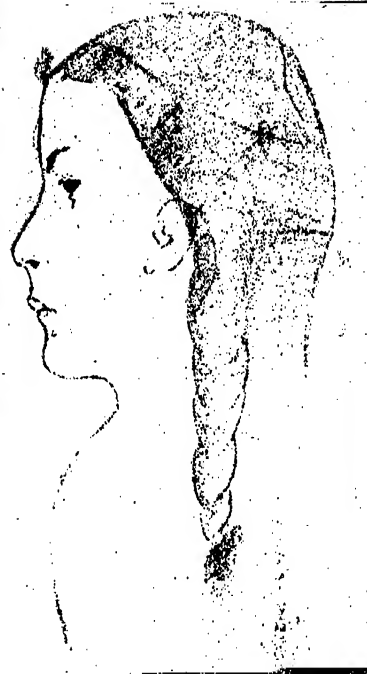
lastly the features put in. Before adding these details the hair had to be completely drawn and shaded, so that the general poise of the head was secured first of all. When this was satisfactory the pupil was allowed to devote all her energies and attention to the profile and details. Strong light and shade was avoided, the light as much as possible falling full on the face of the sitter.

Always fix carefully the angle the nose makes with the forehead (profile view); and the triangle formed by the eyes in relation to the mouth and chin, in a front view.

Beginning thus with silhouettes, the class (of twenty-five to thirty) gradually arrived at three-quarter and full-face positions in the Second Year.



Post Drawing



First-Second Year



PLATE XI

This Plate represents the work of the Third Year. Average number of scholars as before.

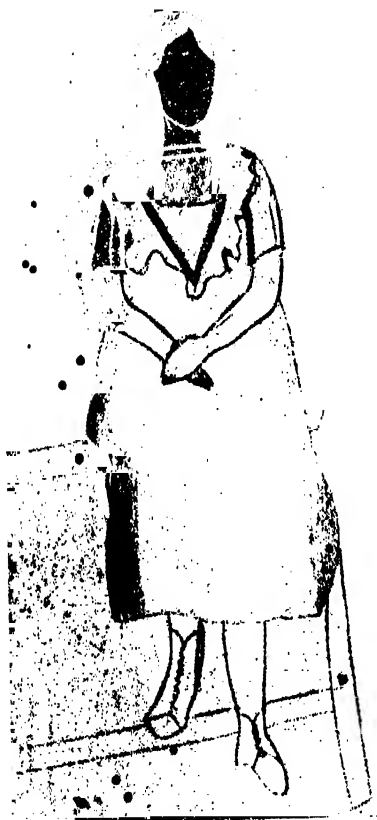
They have arrived now at the "full-length figure" stage. The general "swing" is first sought for, and proportions checked by the "head" standard. There is nearly always a tendency to make the arms, hands, legs, and feet much too small, often ridiculously so. A rigid application of the "head" test is the only remedy. The length of the hand and the foot compared with that of the face and head is also tested. Extended hands from wrist to tip of middle finger equal distance from chin to brow. A foot is about equal to length of head.

The whole figure including the hair has to

be drawn and shaded before the facial features are allowed to be added, and then special attention is given to them. Hence a blank stands for the face until quite the end. This ensures the action being true, so that the body tells its story without its face. On the Plate, one face is still omitted. Sometimes these are added at a special sitting.

All pictorial "subjects" and "compositions" had perforce to be worked at home with a few exceptions, the actual drawing lesson being limited to one and a half hours per week.

"Memory" poses were tried with some success. Colouring, if required, was added afterwards.



From 1865



Third Year

PLATE XII

This Plate shows some examples of the fourth, and final, Year. The scholars were aged thirteen and fourteen, and numbered about twenty in class: time per week, just one hour. These are $\frac{3}{4}$ -hour sketches made to be afterwards worked up into figure compositions, drawn and coloured in class. Perhaps as many as half a dozen poses would be first drawn; from which would be selected those that would most suitably combine for a subject. Translated into subjects, they became: girls

sitting in meadows, by streams, on stiles, standing by cupboards, at garden gates, reclining under trees or in hammocks, and so on. . .

Pictorial illustration of poems or of historical episodes was also indulged in at intervals. Such productions, though often funny, had their value, and revealed in many cases very great invention and originality.

They were mostly coloured entirely from imagination.



Pose Drawing -
Class-work
Fourth Year

Painting

PAINTING

Colour fascinates! It is the music of art. But music has rhythm and harmony, and painting must have form, and light and shade, as well as harmony. Therefore the highest aim in painting must be to get the form, and light and shade, correct. Here the value of having studied "light and shade" comes in most conspicuously. If the *colour tone* is right, the light and shade is bound to look right. At first, of course, with very young children, one only troubles about colour, its broad effects; later one endeavours to secure all its thousand and one subtleties of light and shade. The orange is no longer a yellow patch, but a glowing mass of numerous tints and shades of orange. This power of distinguishing the subtle variations of tint as influenced by the light and shade, should be the gradual aim as the work progresses. Only white paper and transparent colours are to be employed for these particular exercises.

*Later on body colour (tints mixed with Chinese White), may be used in conjunction with coloured-paper backgrounds.

Whenever possible, direct brushwork (i.e. without any preliminary pencil sketching in) should be adopted.

This, however, is not feasible in dealing with complicated forms or groups. Careful and delicate sketching in of the leading masses and some detail, either with the pencil or a pale dip of colour in the brush, then becomes absolutely essential. Painting is "invertebrate" or "sloppy" without underlying form, or as we say, "drawing".

As an introduction to colour work, some exercises in painting light and shade in sepia (monochrome) might first be attempted.

A small colour box containing only pans of the following colours: chrome yellow; yellow ochre; crimson or light red; ultramarine; vandyke brown or sepia (to serve as a warm neutral), has been found adequate for most class work. Small wooden boxes have been made in woodwork centres to contain these few pans.

Scholars should always be encouraged to purchase their own boxes of colour.

METHOD

SCALE



PLATE I

Here are given examples of strongly pronounced colour. They please children—the bright colours appeal—and this means that the young scholar will probably get a better grip of them. It is not intended here to go into the very elementary, though necessary, preliminary exercises of the meaning of the chief colours—primaries, secondaries, &c., or their mixing, blending, harmonizing, the method of laying on flat washes, and brush manipulation. This preparatory ground will be covered by degrees whilst the scholars are actively at practice trying to render—largely by way of experiment—what they see in nature or objects. Fulllest information on this elementary section may be found in *Free-Arm and Industrial Drawing*, Plates XIV to XVI.

Suffice it to say that if a scholar can carefully lay on a flat wash in a map, he is in a position to paint right away such a group as the toy balloons here shown. One of two preliminary sketches is needed to build upon. Either a faint pencil or brush sketch (1), or as an alternative a faint and direct colour “blot” carefully corrected as to right form (see 1a). No previous

pencilling is required in this latter case. High lights must be most carefully left, then if necessary softened off afterwards and touched with grey. Their positions are important and must be carefully noted before the painting is begun, particularly coming as they do here, always on the same side of the balloon. This is what happens in bunches of berries or grapes. If hopelessly lost they must be put in with Chinese White, or sponged out.

For the sake of learning how to manage “washes” these balloons might each be made about 2" in diameter (copying the originals, not this plate). Each must be dry before the other is begun, and the middle portion of each should be first damped with clean water not quite to the edge. This will help the colour to flow on nicely. Enough paint must be mixed for each, and the darker side strengthened while still damp (see 2).

Background and cast shadows should be painted round, either first or last. Patience is needed and “sticking at it” until all comes right. Don’t be afraid to “wash down” and repaint.

PLATE II
INFLUENCE OF
SURROUNDINGS

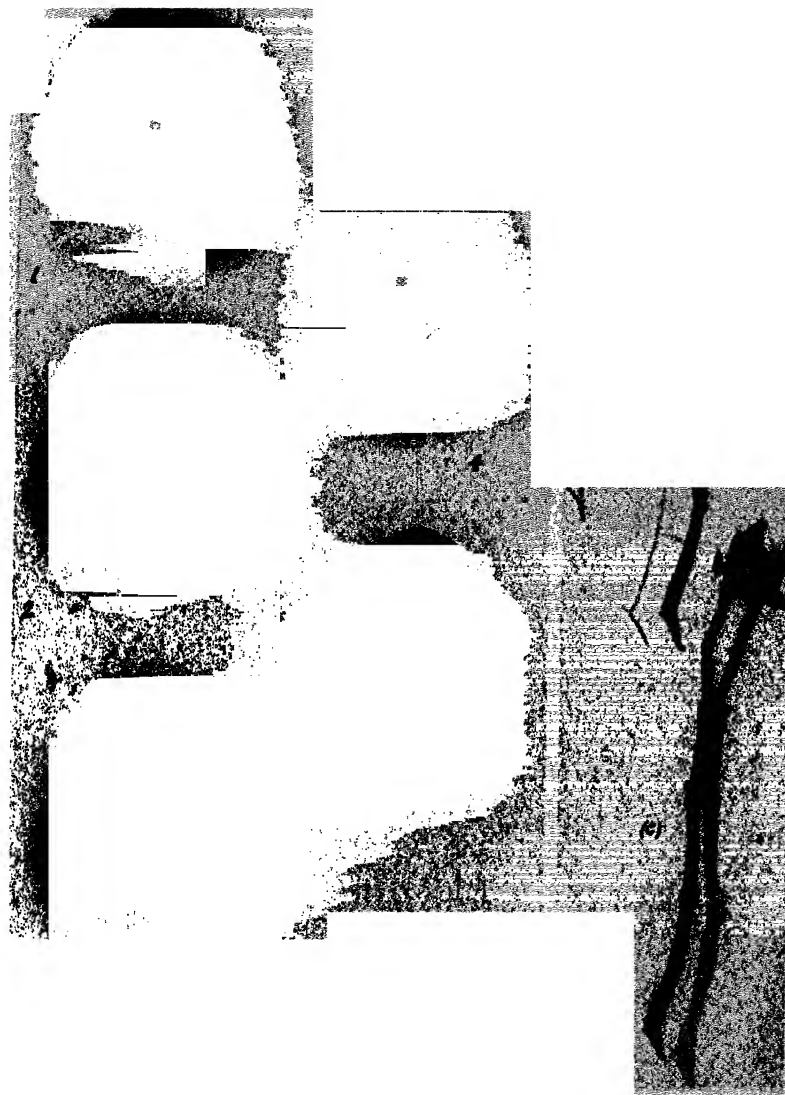


PLATE II

Environment, or the Influence of Surroundings.—

The colour of any object unmistakably varies under every new condition. Try the experiment before the class with some brightly coloured glazed pot and many-hued backgrounds and foregrounds, and by natural and artificial light (say candlelight). The strongly reflected lights vary the colour considerably—sometimes one could hardly imagine it at all the colour it actually is. It is a most interesting phenomenon. Take this yellow teapot for example. Round the high lights it is greyish. The high light itself may be nearly blue. The shadow side strongly catches the colour of whatever it is next to, red, green, blue, white: so much so, that the white nearly extinguishes the shade on the right side of the pot. Only a little of the “middle tone” remains the pure local yellow in each instance.

Again, there is a reciprocal action. The *cast shadows* are greatly affected by the reflected yellow of the pot. They vary in each case, and in

No. 4 the whites cause them to become very pale and yellowish. In this instance too, the warm glow of the pot is cast all around it, as it is on each white foreground in Nos. 1, 2, 3.

No. 5 shows it with dark surrounds and polished foreground under candlelight. How rich and subdued it now is! Match all these colour variations, *forget it is an object you are copying*, think of it only as a *patch of colouring*, and you will probably soon attain to its true representation!

The chestnut twig is shown in its preparatory and in its finished stages. As in the case of the balloons on Plate I the preliminary sketch may either be in pencil or brush as in (*a*) or (*b*¹): or in direct brushwork as in (*b*²).

If cast shadows are shown, let them be faint and soft, and extremely greyish. Winter “twigs” are excellent preparation for summer “sprays”. They teach respect for the drawing of stalks, before leaves and flowers somewhat obscure them.

PLATE III

These two studies speak for themselves, one being a study against a light ground, or with no background, the other a study against a dark background. In the latter case the background should first be put in, leaving the white silhouette, then paint the flowers and leaves into this white silhouette (spectral or shadow picture). Of course there should be a conscientious and careful drawing first (as shown on the previous plate), or the whole thing would be quite impossible. One cannot think of the drawing and the painting at the same time. When thinking of the painting, one's mind wants to be relieved of thinking of the drawing, except to improve it. If anyone doubts his, let him try the experiment for himself. "Sloppiness" will not atone for lack of drawing.

Note what a very good example of colour

blend are the leaves of the aucuba (No. 1). The yellow is run on all over, and the green then run into it. The midrib is picked out afterwards with the nearly dry sharp point of the brush.

Study in this connection branches and sprays painted by the Japanese: they are so full of life and vigour.

And when it comes to "trees", note how marvellously and yet simply they get the "drift" of them, as they bow before the oncoming storm and pelting rain.

Other subjects, like wheat, oats, barley, pine leaves, yew, shepherd's purse, shells, and feathers, can in most cases be put in by "direct" brushwork, even if "foreshortening of leaves" be entailed in the operation.

Feathers, put in with full "juicy" colour, make excellent practice at all times.



PLATE IV

This plate completes the series on painting. It exemplifies "space filling" and "colour harmony", in still-life groups.

The colour "patch" has become more complicated, but that is all. There still remains a "dominant keynote" of colour about each of them.

There can be no doubt that 1 is a pale grey scheme; 2, a warm yellowish-brown scheme; 3, a mixed grey and-green scheme with minor but harmonizing splashes of pure blue and red as complementaries.

The containing outlines of the pictures - coloured in harmony with them by employing their deepest predominating tone - further emphasize and help these effects.

This "colour scheme" idea is the best and safest plan for securing harmony. If one looks at such colour schemes as are in butterfly wings, bird's plumage, &c., one can always tell the dominant colour note. That is the secret—

variety within harmony. Even in landscape and figure or drapery studies, this fact has to be considered: rich and mellow effects, cold and dull effects, and so on. Nothing crude and discordant can arise, if nature be so followed.

Lastly, it is imperative to notice the shapes of the "holes" or "panels" or "window panes", through which the group, picture, or landscape, is seen. Try experiments on any proposed group by looking through small holes of the shape of the picture required, cut in some thick cartridge paper or brown paper. The portion of the group most interesting or suitable for the picture will then be readily detected, its composition seen. Groups may even be "cut off" in Japanese fashion with good effect at times (see No. 1). Landscape and figure artists are known to adopt the same "trial" plan of securing good "filling", and "composition".

PLATE A
SPACE FILLING
COMPOSITION
COLOUR HARMONY



COMBINED PENCIL AND WASH DRAWINGS

Such drawings are a kind of cross between pure “shading” and pure “painting”. The method consists of tinting an already carefully shaded pencil drawing with “flat washes” of the local tints of the object. It is mentioned in *Free-Arm and Industrial Drawing* as being a useful preparation for “painting” proper;

and for the lower children of Standards I, II, and III it has proved of considerable utility, by minimizing the difficulty of getting them to distinguish between light and shade (or tonal values) and colour. It is an expedient of course.

MOUNTING OF DRAWINGS, AND GENERAL APPLICATION OF PRINCIPLES

Drawings frequently require cutting down, and almost always trimming, before mounting. This demands careful consideration, and forms an essential part in the training of the student. No pains should be spared to "finish off" the picture by attention to such details, right up to the very end. A special lesson might be devoted to it. Use carefully made paste in the process.

It has been found useful to employ "finders" for the purpose of discovering and determining the best proportions and arrangement of the picture. These are two similar pieces of cardboard (L shaped, and of white, brown, or black tints), being each say 12" x 7" (or larger), and 1½"-2" broad throughout. They should be adjusted by several trials in various positions around the central feature of the study, until the most pleasing and suitable arrangement is found, thus:—



Then with a black-lead pencil draw an out-

line within the shape, and cut the picture out, or run it round with a coloured border line.

Somewhat analogous is the proper placing of an out-of-door sketch within the sheet on which it is made. If it is to be mounted, it may of course extend right up to the margins of the paper. If not, it should occupy one part only, preferably the centre. Compare the following (a) and (b).

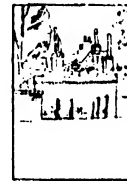


Fig. (a)



Fig. (b)

(a) Represents "bad spacing", and the way a novice invariably goes to work, filling the whole sheet, and yet omitting half the subject; and employing only "outline".

(b) Shows "good spacing", and the manner

General Application of Principles

in which it should have been fitted into the sheet : with proper regard to the "solidification" obtained by good strong "shading".

In a picture, *the interest should always be focused in one central idea.*

Lastly, Sketch (c) is given to illustrate not only how the composition and general arrangement of a landscape should be considered in its treatment, but also to point attention to the necessity for expressing the atmospheric planes of distance—those three essential planes of *near*,

middle, and *far distance*, which occur in almost every out-of-door subject. They are clearly apparent in this small block, and should ever be sought for by the discerning and investigating student.



Fig. (c)

